EPSON CONNECTION

Devoted exclusively to Epson Computer users.

NOVEMBER 1984

3

A STAR RISES

GENEVA SOFTWARE

Product Features

PX-KEY **$19.95**

PX-KEY is a utility program that makes the *function keys* on the Geneva (PX-8) computer much easier to use. Simply enter the program, depress the function key you want to change, and enter the desired key codes. When you are done, all codes will be stored in memory, under a file name you define. Then, any time you want to use your function keys, simply enter the function key file name - and all your function keys will be operative!

PX-100 ..... **$149.95**

PX-100 is a full featured communications program that includes autodial and autologon. Both user and terminal passwords may be automatically submitted. In addition, PX-100 will emulate major features of a VT-100 terminal allowing hookup to a variety of mainframes. This is a significant enhancement in the application utility of the Geneva computer.

PX-CODE **$395.00**

This is the *bar coding software* for the Geneva computer. It includes a high quality ruby tipped reader wand, decoding software, and bar code printing software to support the Epson printers (MX,FX).

PX-VIDEO **$495.00**

This software automates the control of rentals at *Video Rental* stores. Customers and tapes are entered on the data-base, and the Geneva keeps track of who's got what. Also maintained is the frequency of rentals and last activity date, information so necessary in making correct business decisions. **PX-CODE** may be added to further automate the process. Requires minimum 60K RAM and one disk drive. Will support up to 500 names and 2500 inventory items; expandable simply by plugging in more disk drives.

Technical Data

*All software mentioned above has been written specifically for the new **Epson PX-8** computer. They are written in "C", and assembly, which means that these programs are small and fast. We also do full custom development of software and supporting hardware.*

CARDCOMP

Cardinal Computers, Inc.
1600 North I-35E, Suite 109
Carrollton, Texas 75006
(214) 446-9650

IF YOU OWN A QX-10, YOU OWE IT TO YOURSELF TO GET QXDRAW!

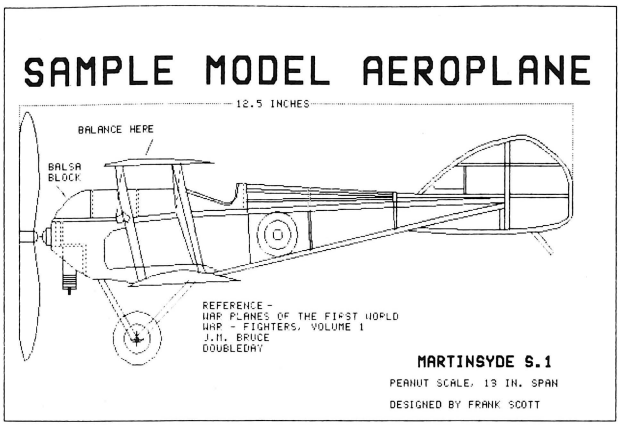
WHAT IS QXDRAW?

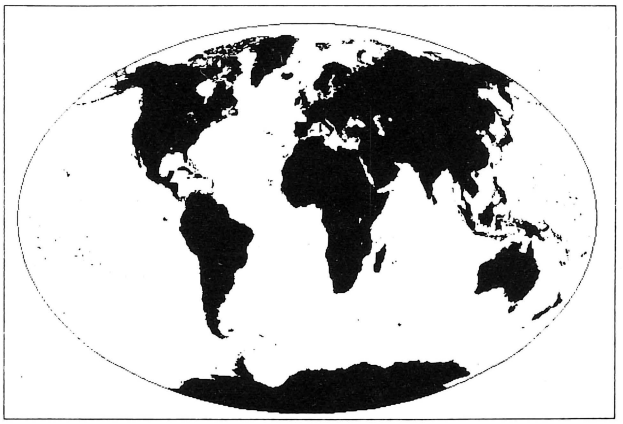
QXDRAW is a powerful graphics design tool that exploits the excellent graphics capabilities of the Epson QX-10. It allows someone unfamiliar with computers to design and draw figures, charts, schematics, or blueprints in no time. QXDRAW has the capability to store, retrieve, and print figures drawn on the screen. In addition, it can fully manipulate figures and text by changing size, angles, and dimensions.

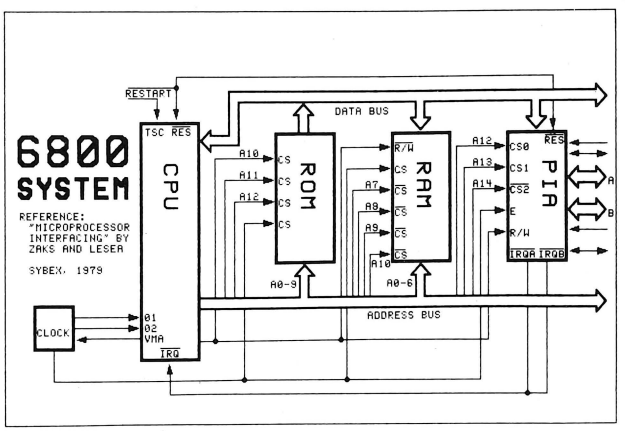
QXDRAW —

* Provides an easy-to-use cursor that can be moved about the screen.
* Draws straight lines between points on the screen.
* Draws curves between points on the screen.
* Draws circles and ovals easily.
* Allows solid, dotted or dashed lines to be used.
* Allows lines of varying thickness to be used.
* Includes "area fill" capability.
* Features the Epson function keys: HELP, UNDO, STORE, RETRIEVE, PRINT, INDEX, and STOP.
* Allows text to be displayed at any location, size, or angle.
* Stores and retrieves the screen display on disk.
* Prints the screen display on Epson printers.
* Allows figures and symbols to be created, stored, and retrieved at any location, size, or angle.
* Allows text and figures to be slanted in any direction, giving modern or three-dimensional effect.
* Provides for user-created files to be input and displayed on the screen. This allows data from other programs to be used.

NEW LOW PRICE **$99.95**







AMERICAN COMPUTERS
118 SO. MILL ST
PRYOR, OK 74361
918/825-4844
Small Business

See Your Local Epson Dealer or Order Direct
(918) 825-4844

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ABOUT THE COVER:

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STAFF

PUBLISHERS
Carolyn McCarthy
Maureen Mertz

EDITOR
Carolyn McCarthy

ASSISTANT TO THE EDITOR
Christopher Wills

SPECIAL PROJECTS EDITOR
Allen Howell

PORTABLE COMPUTING EDITOR
Bob Hermann

ADVERTISING/PRODUCTION
Maureen Mertz

CIRCULATION MANAGER
William V.J. Andrade

EDITORIAL CONSULTANTS
Ron Spatafora
Ralph G. Ruh
Franc LaClair

EPSONNET RBBS/RTPM COORDINATOR
Ralph G. Ruh

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POSTMASTER: Send address changes to: **EpsonConnection, P.O. Box 14027, Detroit, Michigan 48214.**

SuperCharge your HX-20 with products from Portable Feat & Engineering
136 Lowell Street
Somerville, Mass. 02143
Ask for Mark Marlow at 617-666-3591

Parallel printer interface unit for HX20. Works with or without the ram expansion unit. $139

Auxiliary battery pack kit for the HX20. This kit can double the time between HX20 recharges. $59

Continuous power supply for the HX20. This charger is ideal for the user who wants to leave their HX20 plugged in continuously. $39

We have many other "Portable Feats for the HX20", look for them in next month's issue or call us for more information.

The Epson QX-10

The Bi-Tech Multiplexer & Hard Drive System

A powerful combination

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THE BI-TECH HARD DISK SUB SYSTEM

Combining proven technology with innovative Bi-Tech design, the highly reliable 5.25-inch HARD DISK DRIVE SUB-SYSTEM fulfills the fundamental requirements of a peripheral storage device, which provides mass storage, high speed data transfer, and removable backup capability.

THE BI-TECH MULTIPLEXER

By adding the multiplexer to your Hard Disk you can add more computers to your system. Four (4) users can share 1 Hard Disk subsystem. An essential unit for a small to medium size business where multiple computers need to share a common data base. Different models of computers as well as multiple operating systems can share the Hard Disk Drive at the same time.

THE BI-TECH REMOVABLE CARTRIDGE HARD DISK DRIVE

The Bi-Tech REMOVABLE CARTRIDGE is small, lightweight, and portable.
Yet, it provides a total storage capacity of 5.0 Mbytes. Pre-recorded embedded servo information provides for the most reliable cartridge interchangeability and data integrity in the industry.

EPSON QX-10 features:

- ☐ TPM/Valdocs support
- ☐ CPM 2.2 support
- ☐ DOS PLUS 4—TRS-80 compatable
- ☐ QX-PC MS-DOS support**
- ☐ MS-DOS 2.0 can share with IBM PC**
- ☐ Multiple operating system segments
- ☐ Variable segment size capability
- ☐ 1 to 8 logical segments

**COMING SOON! PLEASE WAIT!

SEND FOR YOUR DESCRIPTIVE MASS STORAGE SYSTEM BROCHURE.

DISTRIBUTED BY
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10 CARLOUGH ROAD
BOHEMIA, N.Y. 11716-2996 (516) 567-2444

From Your Editor...

As the COVER indicates, Valdocs 2 is at last on the horizon. It is expected in December. The product was demonstrated at the Press conference held by Epson in October, and will be further demonstrated to the public at the COMDEX show being held in Las Vegas, Nevada November 14-18. For those who have not seen a listing of the features for Valdocs 2, Rising Star has a hotline 1-800-CALLNOW phone number you can call. They will take your name and send you a colorful brochure listing the more than 450 features of Valdocs 2. For any one not in the calling range of this number, a letter or call to Rising Star Industry Headquarters will also bring the brochure your way. (Rising Star Industries, 24050 Madison Street, Suite 113, Torrance, CA 90505. 213-378-9861). Let's hope Valdocs 2 will put the verbose critics to rest, and fulfill the Users' needs.

New PORTABLE Section: Due to the new computer products from Epson we debated starting a separate portable Epson computing newsletter. With the amount of overlap of programs and CP/M system information for both the QX and PX computers, and the overlap of peripherals, we decided to keep the portable computing information within the same magazine. We will be adding on pages for this purpose, and develop a special portable computing section.

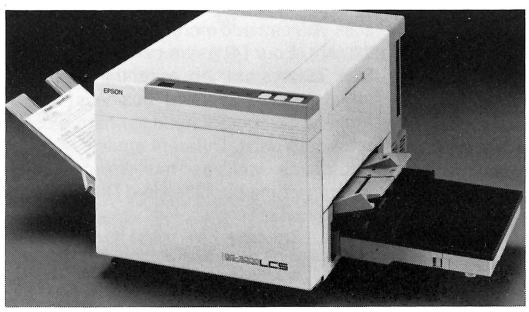
The Comdex show held in November promises to be one of the biggest computer shows held in the U.S. Last year's attendance went over 80,000 registrants. Our January issue will feature new products presented at the show, and their impact on our Epson computing lives.

Featured in the NewsNotes column this month is news from the Epson Press conference I attended. The item of greatest future impact is the announcement of the planned expansion and commitment of Epson in the United States. The planned construction of a major manufacturing plant in this country as well as their investment in a software company, Ascent, Inc., and expansion of an Advanced Products Division represent serious commitment to Epson products here. The Press conference included a tour of the new O.E.M. (Original Equipment Manufacturing) plant. Epson has produced printers and printer mechanisms, and LCD (liquid crystal display) mechanisms for a long time. These O.E.M. products are purchased by other companies, for instance the printer I purchased with my first TI 99/4 computer was actually an Epson printer inside the Texas Instruments cover. Epson also manufactures storage products, like floppy and hard disk drives. One of the new ones is a 5½ inch 1.6 Megabyte, half-height disk drive unit. The O.E.M. group just announced their very unique Liquid Crystal Shutter page printer, and a ribbonless color (7 colors) ink-dot printer mechanism. As these products take off in the O.E.M. market, we hope to see many of them also available to end users, as well as incorporated into future computers.

New Epson manufacturing plant to be built outside Portland, Oregon

Questions about color for the QX-10 continue to be unanswered. The QX-16 will accept an IBM color monitor, and there are plans to bring out a Color QX-16 in the first half of 1985.

EpsonConnection Resource Guide. Don't miss our December issue. It is planned as a Resource guide. It will include: an index to all our previous issues, a cross-index listing of software and hardware products compatible for the Epson computer user, a book store listing, a guide for beginners on accessing modems to call Bulletin Boards, Epson User Group newsletters, Support phone numbers, a Who's Who section in our computing world, and much more. This Resource guide is in place of the usual issue, and we hope you find it helpful.



GQ-3000 Liquid Crystal shutter printer

Letters to the Editor:

Dear EpsonConnection:

Where have you been all these months when I needed you? Think of all the wasted hours of pouring through computer-user magazines hoping for some scant crumb of information or help in the jungles of Apple-IBM-Commodore-and TRS!

How long have you been publishing this wonderful (I hope) aid for lost Epsonites?

Are previous issues available? (Since I'm starting school late, you'll be way ahead of me.)

You list a "Basic Corner." Not for me; I'm madly in love with Valdocs and would be completely happy if Epson would just come up this fall with several of the improvements promised in the manual, and if my ComRiter II printer would oblige by obeying Valdocs' orders. I want nothing to do with CP/M or data-basses, modems, or spreadsheets, graphics, schedulers, or card files. I'm a writer and I want good word-processing and reliable printing.

Sincerely,

Isabel Stein
Arlington, MA

We are equally glad you found us. Our first issue was published as a bi-monthly newsletter July/August 1983. We became a glossy monthly magazine in July 1984. Back issues are available. The first 6 we sell as a set at $15, and $3 for each of the others. We certainly hope your CR-II is doing better with Valdocs 1.19 update.

Thank you for your support!

Dear Ms. McCarthy,

In the latest issue of the EpsonConnection you requested some suggestions on how the magazine might be improved. I have been an owner of a QX-10 for a year and a subscriber to the EpsonConnection almost since its inception. I would like to make some suggestions for your consideration.

First, I was pleased when you decided to publish the magazine once a month rather than bi-monthly. However, I find the price a bit expensive. Was it really necessary to go to a glossy finish which is more expensive than the type of paper used earlier? Several of my friends who use WordStar on the Osborne 1 or Executive are subscribers to FOGHORN. FOGHORN has been around for several years and continues to use non-glossy paper. I would suggest that you return to less expensive paper.

Second, I would suggest that your articles not repeat what can be found in other books or magazines. For example, if users are interested in MBASIC (you have published several articles on this), then there are literally dozens of books on the subject — including the book which came with the QX-10.

Third, although I do not use WordStar, I found the articles in FOGHORN to be most helpful to those who do use WordStar. These people are shown how they can alter WordStar to work better with their printers, etc. Would it be possible that you could publish articles on how to alter VALDOCS to do different things with a FX-80 printer, e.g., to turn the platen up to print a true footnote. I realize that 1.19 does not support "superscripts" yet, but when the new version comes out I would hope that suggestions such as this could be offered. I'm sure that there are many hackers out there who have tried different things which could be passed on to the rest of us.

Fourth, I do appreciate the advertisements which you run. I have found items which I otherwise would have been unaware of. I think the short reviews on new products is a very good idea, although I thought that 3 pages to review the new LQ-1500 was a bit too long. In addition, spending almost 2 pages to describe the changes which we got with the 1.19 up-grade was redundant.

In conclusion, I like the EpsonConnection, but I think that you could make it more useful by publishing more articles on items which we cannot get elsewhere concerning the QX-10, HX-20 and other Epson products. Once again, something similar to FOGHORN, although maybe not as technical, would be of tremendous help.

Thank you for the time and effort which you have put into the EpsonConnection thus far. I will look forward to an even better edition soon.

Sincerely,

James J. Walter
Jasper, IN

Thank you James for your comments and suggestions. Our glossy paper and look was done for two main reasons. One, we feel the Epson products are of very high quality and wanted to reflect that same standard. Second, advertisers also expect a good quality paper for their advertising and adds.

We appreciate your comments about not being redundant in regards to items which can be found elsewhere. We will certainly continue to focus on user tips and suggestions on how to get the most out of different products for the Epson Computers.

We certainly appreciate your feedback.

Sincerely Editor

NEWS NOTES

* Epson America held a press conference Oct. 10, at their headquarters in Torrance, CA. The following items are of great interest to U.S. Epson product owners.

› It was announced that the upgrade to Valdocs 2.0 will cost under $50 and is still planned for release in the "fall selling season." No formal date has been set, however demonstrations and hands-on activity was provided by Rising Star Industries staff.QX-10 owners will have a two disk boot procedure for loading Valdocs, and Valdraw and Valpaint will be optional modules offered by R.S.I. A mouse can be used with Valdraw, but is not necessary.

› Introduction of the new QX-16 desktop computer. This has a coprocessor 16 bit (8088) and 8 bit (Z80) computer. The new QX 16 will have three operating systems packaged with it. The MS-DOS 2.11, CP/M-80, and TPM 3 (Valdocs). It has two 5¼" floppy disk drives which have 360K storage (double density) in the 8088 mode, and 720KB quad density in the Z80 mode. The computer comes standard with 256K RAM and is expandable to 512K. The unit has three expansion slots, an IBM Selectric-type keyboard, 10-key numeric keypad, and the special application keys as used with the HASCI keyboard. The monitor is a 12 inch monochrome monitor, with 640x400 pixels resolution. It comes with a centronics parallel printer interface, and an RS232 serial port. Included inside the computer is an IBM-PC video emulation board. Options listed are: a high resolution color monitor, hard disk (10MB and 20MB) and a direct connect 300/1200 baud modem card. The computer will come with Valdocs 2.0 integrated software, and will retail for under $3000. This new computer is expected to be available early in 1985. The unit will have the standard 12 month Epson warranty.

› Additional exciting news is the amount of commitment demonstrated by Epson for the future support and development of their company products. They have announced they will be setting up a new operating division and software company in California, and a manufacturing facility near Portland, Oregon. This represents a major commitment from Epson Japan. Their Advanced Products Division is currently located in Palo Alto, and is being expanded. Ascent, Inc., will be the software company used to develop new applications and business software for their personal computers. This company is based in Mountain View, Calif.

› A formal announcement was also made by Mr. I. Hattori, chairman of Epson Corporation and president of the Suwa Seikosha/Epson Group in Japan that a company S-MOS Systems, Inc., was started up last year in San Jose will be assembling and testing their CMOS (complimentary metal-oxide semiconductor) products as well as selling the components needed for computer subsystems, such as microprocessors, random access memories (RAM), read only memories (ROM), interface circuits and gate arrays.

This all represents a tremendous commitment from Epson Japan and Epson America to supporting and expanding their (and our) product line.

Rising Star Industries News

Rising Star Industries has reorganized and added personnel over the past few months. Chris Rutkowski, founder and former President has moved to Chairman of the Board, and Gale Carr has been appointed the new President of the company. Chris will be devoting even more time in advanced product design, development and research and to software for the future. Gale has been the Executive Vice President and Financial Officer since the conception of the company two and a half years ago. She is very involved in developing the scope of world-wide marketing of their products. Gale is a native of Cape Cod, and prior to joining Rising Star, spent eight years in Europe in financial and administrative fields. Roger Amidon has been promoted to Executive Vice President, and will direct the technical operations. Product Support has an additional person. The three support persons who will answer your phone calls and letters are: Dennis Dreyer, Max Roachlin and Barbara Braico. Their support phone numbers are, Voice: 213-373-3153 / RBBS: 213-373-3709.

New Titan QXPC Internal Board

* Titan Industries and Epson America, Inc. have introduced a new upgrade of the QXPC board for the QX-10. The upgrade cost is only $39. plus $3.50 shipping and handling. (Michigan residents add 4% sales tax — $1.56). The procedure for upgrading your current one is: 1. If you sent in your registration card you should be receiving some forms from TITAN in the mail to fill out and return for upgrading to the new board. 2. If you never sent the card in, or do not receive anything from TITAN, you will need to call them to send it out to you. You will have to have proof of purchase, a paid receipt from the dealer you purchased it from is sufficient. They ask you to allow up to six weeks for receipt of your new QX-PC2. You will be receiving an RMA form, self addressed labels, and return instructions.

› Upgrades for memory will not take place simultaneously. That order should be placed separately through Amy Franco at 313-662-8542. Upgrade costs run $80 per 64K upgrade kit, with an additional $30 for an auxiliary board. Titan asks you to order through your dealers.

› Compatible RAM Chips. Titan recommends you use reliable source chips if you are doing the upgrade yourself. Micron Technology, Inc. UT4264-15 and Texas Instruments TMS4164-15 are recommended. Remember that banks 2 through 7 operate at a cycle of 150 nanoseconds.

› This new board makes the QX-10 even more compatible with IBMPC software. Options to be announced shortly are: GW BASIC, RAM disk, and a Printer Buffer.

Con't on pg. 27

QUICK ACTION CARDS

If you want more information on any product or service you have seen in the EpsonConnection, simply complete both sides of the attached form and send it directly to the manufacturer.

EPSONCONNECTION

Quick Action Card

I have seen your _____ in the _____
(specify product name/service) (specify issue date)
issue of the EpsonConnection.

- ☐ Please send me detailed information.
- ☐ Please call me with detailed information.
  Telephone Number (___) _____
- ☐ Please have your nearest dealer contact me.

NAME _____ TITLE _____
COMPANY NAME _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____

EPSONCONNECTION

Quick Action Card

I have seen your _____ in the _____
(specify product name/service) (specify issue date)
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NAME _____ TITLE _____
COMPANY NAME _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____

PLACE
STAMP
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Name and Address
of Manufacturer

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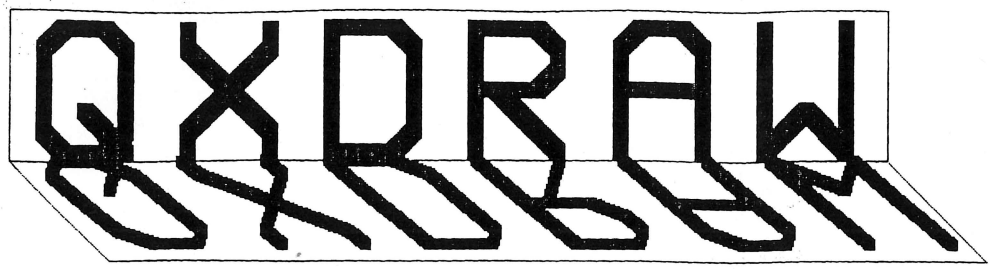
Software Review



by Ron Spatafora

SPEC SPOT

Product: QXDRAW
Type: Graphics software
Computer: QX-10
Operating System: CP/M B
Price: $99.00
Ease of Use: Good
Performance: Excellent
Documentation: Good, only 60 pages.
Summary: An extremely versatile graphics design package at a great price.
Manufacturer:
American Small Business Computers
118 South Mill St.
Prior, OK 74361
918-825-4844

QXDRAW has been around for quite some time. It represents a new wave of programs that are priced right and possess features that rival programs which cost well in excess of $1000 a year ago.

QXDRAW is an excellent graphics tool which will permit the user to create, store, recall and manipulate figures and drawings. This was the first third party product to take advantage of the QX-10's NEC 7220 chip (graphics display controller). Eight of the HASCII keys are utilized for easier operation (in addition to 20 "key stroke" commands). These eight keys are HELP, UNDO, STORE, RETRIEVE, PRINT, INDEX, STOP and LINE.

Once you have successfully made a copy of QXDRAW and have placed the CP/M operating system on it, you should be ready to dive into the world of ultra-high resolution graphics. Upon initializing QXDRAW, you see the program create an empty drawing board, a status line at the bottom of the screen, and a "crosshair" in the middle of the drawing screen, which is actually the cursor. The numeric keypad is used to maneuver the cursor around the screen. i.e. hitting key "6" steps the cursor to the right, "2" steps it down, etc. The keypad cursor controls cause the cursor to move in increments, approximately. 10 pixels at a time. The arrow keys are used to move the cursor 1 pixel at a time, thus allowing for more precise positioning. Before proceeding further, here is a brief listing of the commands and their functions:

A - display **A**ddress of the cursor
C - draw a **C**urve
D - select a **D**ot pattern
F - begin a **F**igure
L - draw a **L**ine
M - toggle the **M**onitor border on and off
N - toggle (**N**egate) reverse-video on and off
O - draw an **O**val or circle
P - **P**aint or fill an area
Q - select the **Q**uadrant of an oval or circle to draw
R - **R**etrieve a figure
S - **S**tore a figure
T - display **T**ext on screen
U - specify the **U**nit of measurement
V - draw a line through a series of points (**V**ector)
W - specify the line **W**idth for drawing commands
X - erase (e**X**tract) a section of the screen
Z - erase (**Z**ap) the entire screen

The "-" displays a line from the last point to the cursor, and the "+" toggles the cursor on and off.

One great feature of QXDRAW is that it is very simple to learn and use. To draw a line, simply position the cursor at the starting point, hit the "5" key to set the point, and then position the cursor where you desire the ending point, and again hit the "5" key (to set the point). Then hit the "V" key, and presto, you have a line drawn. Circles and ovals are just as easy. Position the cursor where you wish for the center of the oval or circle to be and hit the "5" key. Now position the cursor at a second point, which is the horizontal radius of the circle. If you wanted to create a perfect circle, then only two points need be specified. Hit the "O" key, and the circle appears. If you had wanted an oval instead of a circle, then a third point would have had to been specified, which would have determined the width of the oval.

Displaying text on the screen is just as easy. From 1 to 3 points are needed to position the text. The first point specifies the beginning of the text, the second determines the length of space to fill, and the third specifies the height and / or angle of the text. If two or less points are used, then QXDRAW will use it's default settings for the height or length of the text. Once your points are set, hit the "T" key and the status line at the bottom of the screen will ask you to enter the desired text. Enter your text, then press <RETURN> and the text appears. Interesting results occur when the points for the text are sideways, upside down, or angled in different positions. If the line width is set thicker (via "W" command) prior to initiating the "T" command, even more impressive text is drawn.

Perhaps the most outstanding feature of QXDRAW is the ability to store figures created onto the disk, then later being able to retrieve them AT ANY SIZE OR ANGLE! This allows small and detailed parts for a drawing to be drawn on a large scale, then stored onto disk, and later being able to retrieve it at a much smaller scale (or angle, or size). This feature, in affect, makes QXDRAW a great (not to mention cheap) **CAD/CAM**. More so for Electrical than Mechanical engineers, since the figures are two-dimensional.

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QUESTIONS & ANSWERS

Q - How does one "unlibrary" a program?? I have several XXXXXXXX.LBR programs, and I don't have the foggiest idea what I am supposed to do with them. I know I need programs on EC-2 to do this with, but is there anything that tells one how?

J.V. Day, Fremont, CA

A - *The July issue of Epson Connection mentioned the procedure in the "Dis 'n' Data" column. However, if all you are interested in doing is taking the files out of the .LBR file, there is another utility called DELIB.COM or UNLIB.COM on most of the Epsonnet boards. If you have this utility, it simply extracts files from a .LBR file. Just type in "DELIB XXXXXXXX.LBR" from CP/M or TPM "A>" prompt, and the utility will extract all the files for you.*

Q - For over a year now, I have been trying without success to get BASIC programs to print reports to the screen and the printer. The only way I can get a printout on the printer is to use LPRINT. Thus I have to use both PRINT and LPRINT every place I want results both on-screen and on paper. Is there an easier way to do this?

Thomas P. Zurflieh,
St. Petersburg, Fl.

A - *Yes, there is an easier way. By adding a short routine at the beginning and at the end of each program and by changing all of the PRINT and LPRINT statements to "PRINT#1,". Use the "PRINT#1," only where the program is to print output, not where you enter input. What this short routine does is store all of your output on a temporary diskfile, and then when all output is written to it, it then displays the output to the screen or both printer and screen, whichever option you choose.*

```
1 OPEN"O",1,"TEMP.DAT"
2 INPUT"Output to (S)creen or
  (P)rinter and screen";ANS$
3 IF LEFT$(ANS$,1)="P" OR
  LEFT$(ANS$,1)="p" THEN P1P=-1
10 REM * BEGINNING OF YOUR PROGRAM
.
.
1000 REM * END OF YOUR PROGRAM
1010 CLOSE:OPEN"I",1,"TEMP.DAT"
1020 IF EOF(1) THEN CLOSE:END
1030 LINE INPUT#1,AA$
1040 PRINT AA$:IF P1P THEN
     LPRINT AA$
1050 GOTO 1020
```

Make sure that your program executes lines 1000-1050 before ending, otherwise, you won't see any-output anywhere!

Q - Using Valdocs on the QX-10, with the C-ITOH printer ProWriter 1 set up as "other," I cannot print Valdocs pie charts and bar graphs.

A - The "Other" printer driver (selected through Setup) does not have a graphics mode. If your non-Epson printer does not use (understand) Epson bit-image graphics, you will not be able to print Valdocs graphics on it.

Q - In Valdocs, can the MAIL key be toggled to communicate at half duplex / full duplex?

A - It is not possible to toggle the MAIL key to select half or full Duplex. However the MAIL key can be used to control the Hayes Smart Modem's Duplex by entering the Smart Modem's Duplex control sequences right after the phone number that is to be dialed. You can remove the comma before the "F0" (F zero) if you need to. For example: Please enter the number you wish me to dial and then press RETURN. 313-281-2800,F0----------

Q - Is there a way to open and close a buffer under the MAIL function of Valdocs (to save messages returned on CompuServe to disk)?

A - The MAIL function of VALDOCS does not have any means to OPEN or CLOSE a buffer like some modified versions of MODEM. Unfortunately, because of this and other limitations, you will not be able to use Valdocs MAIL to store a file reveived from CompuServe or the Source. However VERSION 2 will use the STORE key to open/close a disk filethat is called a 'SESSIONS RECORD' and you will be able to storeit in the INDEXER or NON-INDEXER Format. STORE Key will togglethis feature, so that you can only record what you want.

Q - How do you select single sheet feed mode with Valdocs on the QX-10 for printing on the FX-80?

A - Set the dip switches 1-3 and 1-4 ON to disable the paper empty sensor in the FX-80. You also need to select the stop after each page option when the final print menu appears on the screen.

Q - Using VALDOCS, is it possible to place a heading on each page of a document automatically? Could you also forward the address of the Epson Co.

L. Matthews,
Denman Island, B.C.

A - *The only way to automate the page heading is either have paper printed in advance with the heading, or have VALDOCS begin down 5 or 6 lines (top of page margin) and put it in yourself.*

Epson Canada
21 Progress Ct.
Unit 18, Scarboro
Ontario, Canada M1G3V4

Epson America, Inc.
2780 Lomita Blvd.
Torrance, Ca. 90505

Q - I am operating a QX-10 with a CR-103 internal modem. I would like to start a Mini-Board in my area. I'm in need of a BYE program that will run on my internal modem. Can you help me?

Don Richard, Emumclaw, WA

A - *Wish we could help, but we can't find one that works for the CR-103 either. Maybe some of you hackers out there can help us out!!*

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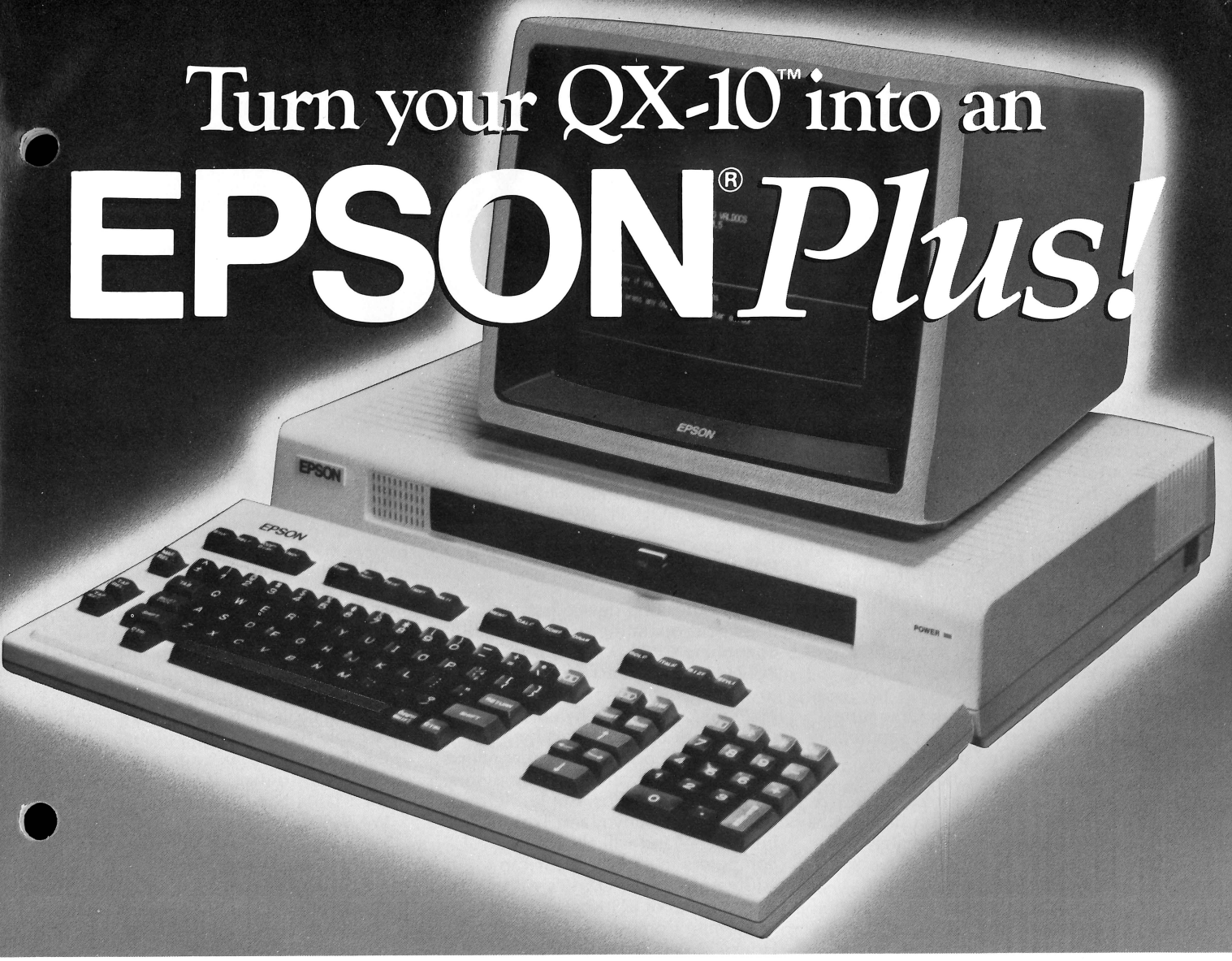
Turn your QX-10™ into an EPSON® *Plus!*



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QX: EASYNET

The EASYNET Network Operating System is a powerful and yet simple answer to networking needs, consisting of a combination of hardware and software for Z80, CP/M-80 based computers. It provides a complete LAN for approximately 244 computers and a maximum distance of 2500 feet. System security and integrity is provided by an elaborate by easy to use ID and password scheme which can limit access to the entire network or any part of it. For more information contact: NET ONE DATA CORP, 4283 Village Centre Court, Missassauga, Ontario, Canada L4Z 1S2.

QX: Check Exec

This program is based on the manual pegboard or one-write check writing system. It stores payee names, address, keeps up with monthly payments due, and provides an accurate checkbook balance. It will print form checks individually or in batches, and also allows for handwritten checks to be entered into the system. Capable of supporting and interrelating a variety of database organizations through its interactive command language, this system also provides utilities allowing its applications to be sent between micros and minis. The suggested retail price is $56. Contact: Division of Computer Science, University of California, Davis CA 95616.

QX: Personal Planner

At only $99 this program promises to calculate your tax liabilities for the years 1983 to 1986. It can be used for retirement planning, investing, IRA contributions, and even for checking your tax return. With only 54 input fields, it calculates several tax schedules and forms. Contact: CPAids, Inc., 1061 Fraternity Circle, Kent OH 44240.

QX: Micromite Fileserver

This desktop device has an intelligent operating system (capable of running CP/M, MS-DOS, and PC-DOS), a winchester disk with up to 40 megabytes and a tape streamer of 20 megabyte capacity enabling the dumping of up to 20 megabytes in 4½ minutes. The operating system allows connection of a variety of computers — Epson, IBM, Altos, Apple, Xerox, NCR, Digital, Sanyo, and Toshiba for instance — and will allow these computers to share data. It can address up to 254 QX-10's with a data transfer rate of 625 Kbaud. Contact: Micromite Computers, Ltd, Regency House, 2 Rockstone Place, Southhampton, England SO1 2EP.

QX: Key-Mailer

A mailing list management system compatible with WordStar, this program creates fully sorted, categorized, error free Mailmerge files. Label printing is integrated with sorting and reporting, envelope addresses, and form letters. The suggested retail price is $125. Contact: SoftKey, 2727 Walsh Ave., Santa Clara CA 95051.

QX: Spellbinder

This wordprocessor is advertised as being so easy to use that a beginner can do so instantly. Yet, it is also reported to have the capabilities of the most advanced word processors. Options include: Electric Webster spelling and using checker, proportional character spacing, mailmerge functions, a built in calculator, automatic footnoting, and compatibility with virtually any printer. Contact: Lexisoft, Inc., Box 1378, Davis CA 95616.

QHP: Smart Cable

This is a universal serial cable (RS232) intended to end the frustration associated with finding the proper serial cable. It can eliminate the need to design and build a custom cable or determine the type of cable necessary for various conditions. The suggested retail price is $89.95. Contact: IQ Technologies, Inc., 11811 N.E. First Street, Bellevue WA 98005.

QHP: Gangbox

This will expand a single RS232 port to three separate devices such as modems, printers, or plotters. Selection is made with a switch on the Gangbox. Suggested retail price is $49.95. Contact: E-Systems, 2308 Fourth St., Berkley CA 94710.

T-Shirts

If you are interested in a t-shirt saying "I love my QX-10" contact: Houston International Computers and United Technologies, Inc., P.O. Box 420007, Houston TX 77242, ATTN Dana Kelly.

QX: Saleseye

This program stores, retrieves, and updates information on thousands of prospects, and can create and print personalized letters and envelopes. Other features include profile printing, file merging, selective searching of up to 18 different criteria, and the ability to be accessed by WordStar and dBase II. The suggested retail price is $495. Contact: High Caliber Systems, 575 Madison Ave., New York NY 10022.

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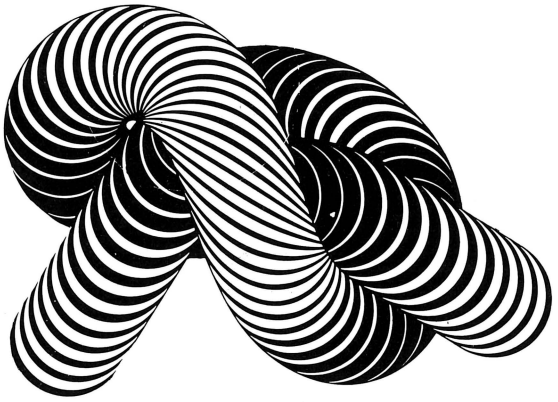
UNIX to QX

by Al Braley



How to get a VALDOCS prepared document into a UNIX computer

If you think WORDSTAR is unfriendly, you should try the UNIX editor. Compared to UNIX, Valdocs isn't friendly, it's a lover. Recently, it was necessary for several of us QX-10 users to start using UNIX systems. Using the UNIX editor is difficult if you have been exposed to any decent word processing softwear, and impossible if you're used to Valdocs. So, I have worked out the following so that you can do most of the document preparation in Valdocs, then transfer it to UNIX for mailing, special formatting, typesetting or whatever.

Prepare the document in the usual way using the Valdocs editor. You won't be able to use most of the graphics characters, bold, italics or underline because UNIX only understands 7 bit characters. You may use the following characters from the GRPH SHIFTed keyboard:

KEYS	CHAR	NAME
[GS][-]	'	Left single quote (UNIX character)
[GS][=]	¦	Pipes (UNIX control character)
[GS][\]	~	Tithe (UNIX character)
[GS][<]	{	Left brace ('C' special character)
[GS][>]	}	Right brace ('C' special character)

Make sure that the last character in the last line of the document is a <RETURN>. You may lose the last line if it does not end with a carriage return.

Using COPYDISK, <S>ingle file copy your document to a Valdocs data disk which contains the following files:

QXMODEM.SYS
ASC.SYS or UNVAL.COM

Of course the document could have been prepared on this disk originally.

From Valdocs INDEX determine the true filename of your file. It will be something like, 84706002.VAL, which is the 2nd Valdocs document created on the 6th of July, 1984.

From the Editor push MENU;
press RETURN to select <M>enu of Applications;
press RETURN to select <R>IGHT Drive;
move cursor to ASC.SYS to keep Valdocs margins;
OR to UNVAL.COM to remove margins;
press RETURN ;

If using ASC.SYS: When prompted for commands, type the true Valdocs filename, followed by switch commands as below.

C - Delete 'dot' commands
D - Create disk file of document
P - Print on list device
T - Type on console

The switch commands must be delimited by "/". For our purposes we only need C and D, (T or P will show you exactly what you are going to send) so the line should look like:

ASC.SYS 84706002.VAL /C/D/ then press RETURN

ASC.SYS will produce a converted file named 84706002.ASC, of course using your filename, will also leave you a copy of 84706002.VAL for your Valdocs Editor.

If using UNVAL.COM: when prompted for commands, type the true Valdocs filename, space, and a name you prefer to call it. The new file extension will be named .TXT for you. CAUTION!! This program may zap you into the Zapple monitor, rather than return you to Valdocs (g0<cr> got me back). The line should look like:

UNVAL.COM 84706002.VAL NEWIDEA.TXT then press RETURN

UNVAL.COM will also leave a copy of the old Valdocs file, and even if you get zapped, it will have created the new one. Either way you should end up back in the Valdocs Editor after a few moments. Now you are ready to call UNIX.

From the Valdocs Editor you can call UNIX this way.

Press MENU;
Press RETURN to select <M>enu of Applications;
Press RETURN to Select <R>IGHT Drive;
Move the cursor down to QXMODEM.SYS and press RETURN;
Press RETURN again for no commands.

Use QXMODEM to connect with the UNIX computer in your usual way, and login to your system shell prompt ($). There are at least two ways to accomplish this transfer. The first is to tell UNIX to expect a file directly. This command line will do that:

$ cat - > filename<cr>

Then hit CTRL T, to exit to the QXMODEM file transfer mode.

When QXMODEM requests the filename for transfer, type in the new filename.ASC (or .TXT). When asked if you want to use character delay, answer N. IMMEDIATELY the program will begin to transfer your file with no error checking. It will also display the file on your screen as it transfers. When the file transfer is complete, you will get the message:

[Transfer completed]
(in Terminal-mode now)

Any thing you now type will be added to the end of the file in UNIX, but you can't edit anything. To terminate the file transfer, hit the [STORE] key, and you should get the $ UNIX prompt. STORE sends UNIX a CTRL D (EOT) which closes the file. At this point the file resides in UNIX, and you can edit it with ed, mail it, or operate on it with any UNIX command or program.

The second way to get the file into UNIX is to call 'ed' from the shell, then give the append command, 'a' <cr>, then hit CTRL T, and follow the above transfer directions. This time when the transfer is completed, you will have to give the dot command, '.'<cr>, to terminate the append. Also it will be necessary to write the file from 'ed' with a 'w

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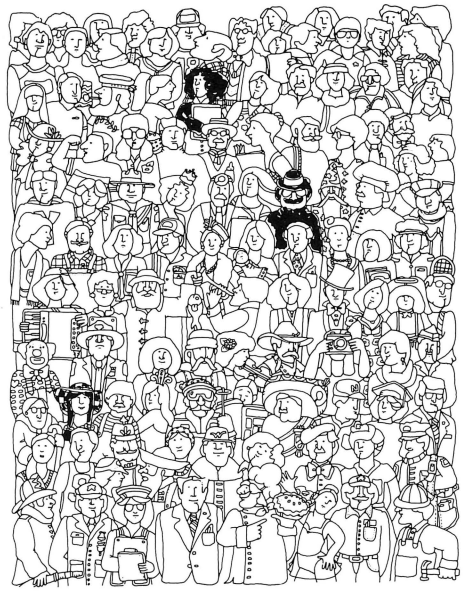
Pascal Programming For the Hobbyist

by David Crotty

This is an attempt to convert the BASIC programmers of the world to Pascal. It is, at the same time, a lure to those non-programmers out there to become Pascal Programmers rather than BASIC Programmers. It has been said [1] that it is easier for non-programmers to pick up Pascal than for those familiar with unstructured languages like FORTRAN and BASIC to get used to Pascal. This is somewhat analogous to the biblical story about the rich man and the camel passing through the eye of a needle. People who are used to unstructured languages have bad habits by definition. There are a number of horror stories about computer problems. For example most of the rocket launch problems experienced by NASA in the old days came from unstructured programs. My own story involves a program provided by a vendor for my job. When it came time to modify the program to suit my own needs I discovered that the programmer had used the GOSUB command to jump indescriminately about the program text but never actually RETURNed to the starting point, leaving great blocks of commands that were never used.



The Idea

Programming languages are written with specific goals in mind. A language like Assembler is designed for maximum speed during execution of the program so the language is rather similar to machine language and does not resemble human language. Designers of BASIC were probably not concerned with speed of execution but rather ease of operation for the human programmer, so the language is very similar to a human language. Most implementations of BASIC are interpretive which is rather slow during execution but is rather simple to modify and debug. Some languages are designed to provide a kind of mental economy. One language, APL, is very concise. Several very short lines of text will frequently perform all the tasks that two pages of BASIC text will do.

One class of programming languages places the highest priority on clarity and structure. The original designers were not concerned with execution speed or length of text or amount of computer memory required. The main concerns were that the program text be easy to follow by any programmer who might have to use it and that the programmer be forced to write his/her program in a very structured manner. Languages in this class include Pascal, Ada, Modula-2, and FORTH just to mention a few.

The structure these designers had in mind included the ability to divide a programming job into a number of very small concise parts. Each part could be written by separate programmers who might have very different writing styles and all the pieces would naturally fit together.

Two men should be mentioned in the context of structured languages. Edsger Dijkstra and Niklaus Wirth struggled separately and together from the early days (about 1960) and were not well received. The story goes like this. Dijkstra recognized the need for this type of language and defined the required structure in a general way. His fellow mathematicians were not impressed and Dijkstra's first student was refused a degree at the university in Holland. Niklaus Wirth, working in Zurich, adopted Dijkstra's definition and developed a new language around the then popular Algol 60. Wirth named the language after a 17th century mathematician and scientist Blaise Pascal. Pascal is now a teaching tool in most universities to the expense of the traditional FORTRAN and BASIC. In fact you can probably tell the average science major's age these days by asking him/her about the first computer language learned. In the old days we all learned FORTRAN and were taught that the GOTO statement was the most powerful in the language. Today we know better.

Pascal has not remained unchanged over the years. A number of Pascal-like languages have appeared. Ada, an improvement named after another 17th century and female mathematician, was developed by the U.S. Defense Department. Modula-2 has been developed by Wirth and is described as "Pascal without the bugs." Wirth also designed and built a machine around Modula-2 called Lilith and this type of computer is beginning to show up on the market. Pascal as originally implemented was meant for large machines, and authors like Grogono [2] and Kernighan and Plauger [3] describe the language as such. The University of California at San Diego developed the first implementation for the small computer. Since there are so many different types of small computers the UCSD implementation developed a compiler that could be transported easily from one system to another. The compiler transformed the human readable language into a pseudo machine code or p-code. This code would be the same for every machine. An interpreter is then designed for each individual computer that will interpret and run the p-code compilation of the program. The only part of the system that has to be changed for a particular machine in this interpreter. The success of the CP/M system is based

on this idea. The system is developed around a small easily modified section that can be rewritten for each individual machine. The system will look the same, however, to the programmer no matter which machine he works on. Thus, an environment is developed that permits the programmer to write a program in a humanly understandable way with the assurance that his program can be run on any machine for which an interpreter has been written.

The Reality

Actually the idea of partially compiling a language into a p-code isn't a bad idea. The running of such a program would be slower than the running of a machine language program (or a fully compiled program) but faster than that obtained for a fully interpretive language like BASIC. The advantages are overwhelming, the resulting program is humanly understandable and is portable.

However, now we approach the real world. Pascal and BASIC have one thing in common. They were both developed as teaching languages and as such have a few interesting items missing. The "standard" Pascal and BASIC command sets lack the ability to contact the outside world. Thus, the means to use a printer or store data on a magnetic disk are absent from the "standard." This means that every implementation is different in these and a few other areas as the various developers of Pascal and BASIC software design their packages as they see fit. This does limit portability, but programmers who publish their programs in magazines take some care to stay close to the "standard" UCSD Pascal.

The Structured Language

When we were taught FORTRAN or BASIC one of the ideas presented was the importance of the GOSUB and GOTO type branch commands. These branch commands allowed us to transfer to any portion of the program and it was great. No puzzle was too complicated for the programmer. However, when we went back to these programs some weeks later to perhaps add a new feature we somehow always had trouble following the program's path. For this reason, in the early days of structured programming the biggest brohula occurred around the GOTO statement. To this day many implementations of Pascal and other structured languages do not have a GOTO type of branch. Lets talk about what a structured program looks like.

The Program Declarations

All programs are given a name and the first line is appropriately:

```
PROGRAM name;
```

This name will be the word we use to invoke the program after it has been compiled.

The second part of the program is the declaration of all variables and constants. Every variable or constant that you plan to use in the course of the program must be declared and defined right here at the top of the program listing. No more of this introduction of variables somewhere on line 5000 and no more of this defining of constants on line 647. At the same time as the variable is defined its type is also determined. Here are some examples:

```
PROGRAM Anything;

CONST
    pi     = 3.1415926;
    alpha  = 1;
    beta   = 2;
    word   = 'word';

VAR
    Number : INTEGER;
    Neat   : REAL;
    Name   : STRING[50];
```

In this example we have told the program (and more importantly ourselves and any other human who might come along) that we are going to use three constant numbers and another constant that is a string of letters forming the string 'word'. In addition, we plan to use several variables during the program. One is an integer, one is a real number and the third is a string having no more than 50 letters. As we proceed in writing the program, if we find that a new constant or variable is needed we must go back to this section of the listing and add the new items. Failure to do this will make Pascal mad at us.

The Main Program

From the top of the program listing we will now jump to the very end of the listing. That may seem a bit strange at first but you will soon see how much sense this makes. The main program is a series of commands that begins with the word "BEGIN" and ends with the word "END" and it is always found at the very end of the program listing. It is also very important that this main program have only as many lines as will fit on the screen of the computer. For most of us that comes to about 24 lines. An example of a typical main program is:

```
BEGIN (*main program*)

    EnterData;
    ListData;
    Calculations;
    ListResults;

END.
```

Now that's a short program. The commands are very clear and you can surely tell from the way I have written the main program exactly what was intended. There is this problem of how I intend to get the computer to do all these things.

The Procedure

Each of the commands in the main program above is really the name of a PROCEDURE that has been written somewhere between the declaration sections at the beginning

of the program and the main program. Thus, I must write the following procedure:

```
PROCEDURE EnterData;

BEGIN (*procedure EnterData*)

    ----;
    ----;
    ----;

END; (*EnterData*)
```

I haven't filled out all the things I want Procedure EnterData to do yet but we now see the basic structure. Each of the other three procedures will have structures like this and will be found in the program listing between the declarations and the main program.

We could compare the Pascal Procedure with the BASIC GOSUB since each would allow us to set up a kind of subroutine that performs a task. This subroutine could be called from several places in the program and we don't have to rewrite it several times. There is one big difference here. With the GOSUB command the program will branch to any line that might be specified. Thus, the unstructured programmer could enter the subroutine at any place that he might choose. This is very nice until we go back some months later and try to debug or change the program. The Pascal Procedure is very persnickity. You can enter the procedure at only one place, the beginning. Also, you can exit at only one place, the end. No choices, and no misunderstandings are possible here.

The GOTO command is available in some Pascal implementations although a purist would not use it. Where it is available the GOTO can be used within a single procedure or program block. It is not possible to branch out of the block to another block with the GOTO, or any other command.

Punctuation

At this point we might take note of punctuation. The semicolon is used to indicate the end of a statement. Thus, a program line like:

```
number := sum + answer;
```

is ended by the semicolon. Since a procedure is really a statement, a semicolon is placed at the end.

```
PROCEDURE Example;

BEGIN (*procedure example*)

    ----;
    ----;

END;
```

The main program is a bit different. In the example of a main program you will notice a period at the end of the statement "END." because that is in fact the end, period. Comments are denoted by (* and *). Actually the curved brackets X and X are preferred but some systems don't have them. In an arithmetic statement like the one above the statement really means to take the sum of the numbers located at "sum" and "answer" and place the result in the place called "number." Since punctuation must be specific here it was determined that the symbol ":=" denotes our true meaning. The only time an actual equal sign is used is during the declaration of a constant. In that case we declare that;

```
pi = 3.1415926
```

and we mean exactly that.

Global and Local Variables

Certain variables that are used in a program may be important enough that the programmer might want to protect them. A variable "sum" might risk being changed in some distant part of the program if another variable of the same name is used. A variable can be protected from such problems by declaring it as a "local variable" rather than a "global variable."

Variables that are declared at the top of the program are global and accessible to all parts of the program. However, if we write a procedure with its own variables as in this example:

```
PROCEDURE Protect;

VAR
    pi : STRING[10];

BEGIN
    ----;
    ----;
END;
```

the new variable "pi" is separate and distinct from the constant "pi" that we defined in the main program. This new variable is accessible only to the procedure named Protect and is not known to any other part of the program. In addition, the constant "pi" that was defined in the main program is not available to this local procedure. We have protected the local variable from being mistakenly altered in some distant part of the program.

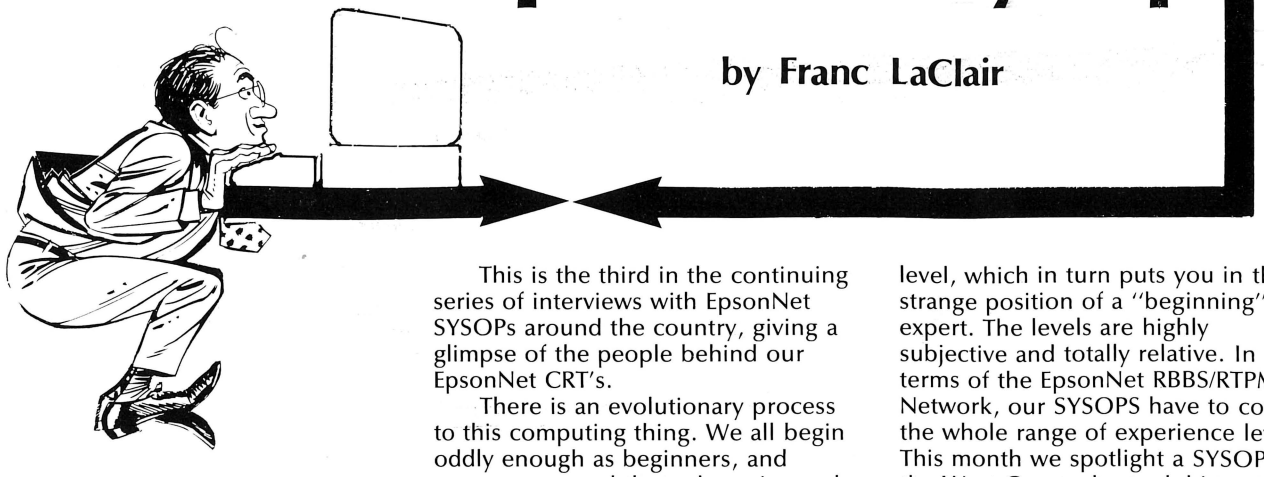
The Compiler and Editor

Every implementation of Pascal comes with its own editor. Usually the editor is not the line type editor that we might be used to with MBASIC. Most editors are page oriented and are similar to WordStar or Valdocs. The program is written in the editor and modified there. The second part of a Pascal package is the compiler. We will ignore the fact that fully interpretive Pascal packages exist. The text of the program is compiled into p-code or machine code depending on the implementation. During compilation the compiler will notice syntax errors and, with some packages, return you to the editor so that the error may be corrected. The compiled program file is often stored on disc and execution is accomplished by loading this file into memory and the running it. The method of execution varies with each implementation. If a run time error occurs it is usually not possible to return directly to the editor for correction. The package will provide some method of returning to the program text for debugging.

Here we have a brief discussion of the structure of Pascal. There are other very important features to the

Con't on pg. 40

Meet Your EpsonNet Sysops



by Franc LaClair

This is the third in the continuing series of interviews with EpsonNet SYSOPs around the country, giving a glimpse of the people behind our EpsonNet CRT's.

There is an evolutionary process to this computing thing. We all begin oddly enough as beginners, and progress upward through novice and advanced, and finally to the "expert" level, which in turn puts you in the strange position of a "beginning" expert. The levels are highly subjective and totally relative. In terms of the EpsonNet RBBS/RTPM Network, our SYSOPS have to cover the whole range of experience levels. This month we spotlight a SYSOP on the West Coast who took his system to sea.

Chip

Lt. Cmdr. "Chip" Cooper, U.S.N., is also the SYSOP of the Monterey Bay EpsonNet RBBS. The board went up recently and has had a good response with over 50 calls the first week. Chip was previously stationed in Virginia where his first glimpse of the QX-10 was at a computer show. He was interested in a machine with good wordprocessing software, ease of use, affordable, and with plenty of "off the shelf" programs. His interest was piqued by IBM, Apple II, NEC, Compaq, and the Televideo. His wallet was snatched by Epson. The "take it out of the box and use it" system seemed just what he needed to complete those voluminous reports for the "higher ups", and in completing written assignments for his masters degree in computer systems management. Shortly after buying his QX-10, Chip took it aboard the U.S.S. Seattle on a six week workup during the hot summer months of July and August. He was impressed with its flawless operation under conditions of fluctuating power, salt air, and wave-pounding, and produced a few "handy-dandy graphs for presentation" aboard ship.

Following his transfer to Monterey, CA., Chip, his wife and two boys 5 and 7 years old have explored other applications of the QX-10 in household management and education/games. Chip has been using the Peachtree Mailing List Manager as a mini database of his relatives. He states that geneology has interested him since his cousin gave him a copy of the "family tree" during his visit to England 2 years ago. "Family Roots" may be his next software purchase.

U.S. Seattle

Chip saw the EpsonNet Network as a necessary addition to the local user's group. The nearest board is in Los Angeles, and dealer support is scarce in the area. The RBBS provides Chip and other members of the MBEUG with useful public domainsoftware and ties them to each other between meetings. He is "looking forward to 2.0" and would like to see more third party applications written, such as the ones he has seen from Acorn Publishing. Education and entertainment programs, and "color" are on his wish list along with greater MS-DOS compatibility than is currently available with the QX-PC board from Titan Technologies.

Chip Cooper runs a standard Epson QX-10 system with a Hayes Smartmodem 300, and MX-80 printer with Graf-Trax. The RBBS is on-line 24 hours at (408) 646-8171.

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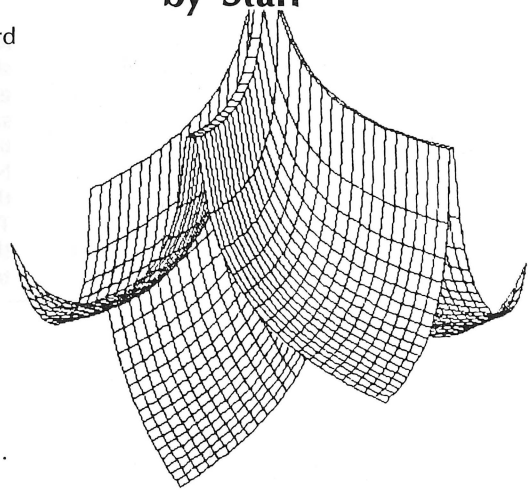
QXPC2 TITAN Industries Update & Preview

by Staff



The "QXPC2" is an internal board which can be installed in the QX-10 option slot. It takes up 2 or 3 slots depending on how much memory you purchase with it. The board makes the QX-10 very compatible with off the shelf MS-DOS software for the IBM. The board comes with 192Kb, and is included with the new QX-10 Plus systems.

Exchange Procedure

Owners of the first board from TITAN can get an upgrade for only $39. plus shipping costs (Michigan residents add $1.56 sales tax). The exchange is being handled by TITAN. They have sent out RMA forms to registered owners of the original boards. If you did not send in your registration card, you will need proof of purchase and should call Titan at (313) 662-8542. The form will come with self-addressed return labels. Titan asks you allow six weeks for the return board, but they will process orders as quickly as possible on a first come first returned basis.

General Info

You will receive two disks with your QXPC2. A pre-boot disk which links the Z-80 on the QX-10 with the 8088 on the QXPC board. Basically it lets your Z-80 know that there is an 8088 microprocessor with additional memory present in the QX. The preboot disk has a special system, a host BIOS program called QXPC.COM.

Some Changes with QXPC2

The instructions that come with the new board tell you how to make a working copy of the preboot diskette. These are written to work with the new CP/M 80 Release B 2.25 version. We tested the board with the original CP/M B 2.20 release and had to change the installation steps taken.

Once the installation, and backup copies of the TITAN disks are done, you are ready to go. It was necessary in our case to turn the clock off in the SETUP menu of the CP/M disk before inserting the MS-DOS system disk.

Important!! Because there are two different HASCI keyboards in use with the QX-10 you should note: If you have the original keyboard (without the EDIT applications Key), after you put in the MS-DOS diskette, rather than hitting return, hit "Q". This initializes the system to know that you have the original keyboard.

There are a number of keyboard commands special to your QX-10 that save time from regular IBM keyboard commands. The overlay labels the STOP key as PAUSE, which is the same as Control-Numlock on the IBM. The insert on key can be toggled either by pressing INSERT or the 0 (zero) key on the numeric keyboard. One thing that doesn't work is the control sequence for rebooting (Control alt delete. This didn't work with CP/M B 2.20). The cursor controls (the arrow keys) work, for cursor movement, except when numlock (Dec. TAB) is toggled.

As on the IBM, the "enter =" key on the numeric keypad is the same as return. Control Grph-Shift is equivalent to the ALT key on the IBM, and is a much better keyboard placement.

Specially note the STYLE key. This is the Graph/Alpha key. This toggles between character and bit mapped video display. The IBM doesn't have this feature. To get the graphics features on the IBM, you have to buy a color graphics adaptor board separately. On the new TITAN QXPC2, the graphics are tied into the QX-10 features, and the display is superior to the IBM display.

The control-c works as control-x as opposed to control-numlock on the IBM keyboard. This is again an example of better keyboard use. This version of MS-DOS takes full advantage of the HASCI features. The function keys F1-F10 are located in place of the file control and application keys, and function as they would on an IBM with most off the shelf applications.

The 9 and the 3 keys on the numeric keypad correspond to page-up and page-down as on the IBM. To use these, numlock must be OFF. The 4,6,8,2 are used also as cursor control keys, however the arrow keys are much more convenient.

Performance

Although the startup and users guides indicate that functions may be slower than on the IBM, without timing it, it appears to be functioning just as fast. Scrolling page and line, is fast and smooth. Mar Rel functions as the Escape key. You also have all of the graphics characters from the IBM available to you.

There are sticky labels provided by TITAN which are designed to be placed on the front side of the keys, not the top. Use tweezers to put these in place. They are sticky enough that they won't fall down, but with age, these might fall into the keyboard. On the original keyboard they are more difficult to place, and they don't show up as well.

The MS-DOS Enviornment

There are some features with the MS-DOS environment that are different than operating in the CP/M environment. For instance in the directory program, with MS-DOS you have a TREE file directory system. This is a very convenient way of organizing files. This is especially useful when there are multiple users of the same disks and files. It allows you to place a name on the disk, and then use

subdirectories. The directory lists the file sizes as well as the date and time of day the file was created on the disk. There are a full set of DOS commands that are very similar to CP/M commands; COPYDISK is similar to PIP. In addition there are BATCH commands which CP/M doesn't have. The command DELETE is the same as ERASE (ERA). There are commands for: find, sort, and rename. Most of the additional commands have to do with manipulating the special directories.

Should I Get The QXPC? and What Can I Do With It?

These are the two most frequently asked questions we receive. The first basic reason a person might want the QXPC2 is for the ability of using software available for the IBM environment, without modification. The other reason is for those who want to transport files between machines, for instance those with an MS-DOS computer either at home or work. You can virtually do your work on both the QX and the other computer, and carry your disks between them. For many QX-10 owners who bought their computer for the ease of use, and primarily for wordprocessing, you may never need the QXPC board. For the users who need to access and transfer files with an MS-DOS system computer this board puts the QX-10 beyond the IBMPC. It is obvious that TITAN has been very busy this past year. We have been running WORD by MicroSoft, and are extremely pleased with it's performance on the QX-10, and delighted that it interfaces with the Hewlett Packard LaserJet printer. We will be doing a review of this board as well as some of the software programs found to run. Framework by Ashton-Tate and Symphony by Lotus will be top on our list for review and comparison to Valdocs 2.

For a list of Titan Technologies tested software see page 26.

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I want it! TRAINING

The Complete Epson Computer Primer

By David Barrett & Michelle Mehterian

Unlock the secrets of Valdocs 2!

People have a special feeling about Epson. Wherever you're going, in school, business, or life, Epson computers and software can open a whole new world for your creativity.

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NEW! — Valdocs 2 on Video!

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Enclosed is a check or money order for the total, or my VISA/MASTERCARD number to bill to.

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*California residents add 6½% sales tax

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Econoware PeachCalc Overlay Template

by Franc LaClair

SPEC SPOT

Program Name: Econoware PeachCalc Overlay
Type: Personal/Home Management
Computer: Epson QX-10
Operating System: CP/M 2.2 A or B
Price: Suggested Retail Price $39.00
Ease of Use: Very
Performance: Good
Documentation: Poor, although not necessary for operation
Users: Adult
Summary: A simple, easy to use home financial management overlay for use with the PeachCalc program by Peachtree Software, Inc.
MANUFACTURER
Econoware Enterprises
1705 Glen Valley
Irving, TX 75061

"Necessity is the mother of invention." The person that originated that simple truism was probably a genius that died penniless. My hope is that will not be the fate of Mr. William Castleton of Econoware Enterprises, the author of this "pre-planned, pre-prepared mask or template" for use with the widely distributed Peachtree PeachCalc program.

Although some of the greatest ideas are simple and useful, such as my 1970 Domestic Pet Accident Insurance program, they take big bucks to get them off the ground. In this ease, Lloyds of London managed to do it. Others just lack expertise in marketing or poor timing. What we have here is a well timed, low budget, helpful little tool to calculate some of the more common or useful home financial questions, with the "what-if" capability of the powerful PeachCalc spreadsheet program.

The Econoware Overlay is just that, a number of protected cells overlaid onto a regular PeachCalc spreadsheet with the border turned off. Imbedded into the overlay are 6 Help Screens, a Main Menu with the appropriate instructions for "jumping" to the module you want, and 10 separate financial modules or formulas to perform calculations. The modules are grouped into 3 categories, Deposits and Investments, Loans and Borrowing, and Planning for Retirement.

Deposits and Investments modules calculate: future values of one time and regular and equal deposits, the amount necessary to reach a specified goal, the effective interest rate on investments. The next set of modules figures the amounts you can borrow given the amount of your payment, and what your payments would be on a specific amount borrowed. The third set makes good use of the "what-if" capability of PeachCalc by calculating the amount to withdraw from an IRA each period, and helps you determine how much you need "to retire as I wish". The last module figures what kind of bite inflation takes from your bread and butter.

All of the modules are very simple to use by inputting the figures you want in the formula, and typing the forced calculation sign "!" to complete the process. The only documentation necessary is displayed on-screen once you have successfully loaded the program Econo.OVL. The 6 HELP screens provide enough backup explanation for the most novice of users. Each module has the instructions for printing at the bottom. The actual documentation was not particularly well written or helpful.

The beauty of this overlay is in its simplicity, and value in performing calculations you might want without having to develop the format and formulas for doing so yourself. It provides instant recalculations by changing the figures in the spaces, and displays the new results at the bottom of the screen. When I spoke directly with the author, he noted new products of the same type for income tax preparation, real estate comparisons, and a tutorial for PeachCalc itself are soon to be released.

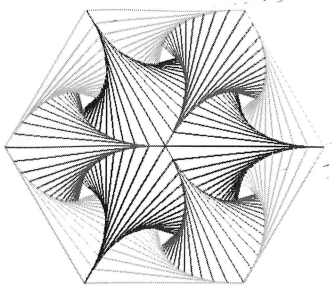
SUMMARY

The Econoware PeachCalc Overlay is an easy to use, helpful home financial planning tool used with the Peachtree PeachCalc spreadsheet. Although a basic knowledge of loading PeachCalc is necessary, the on-screen Help menus of the Econo.OVL program are enough to get you on your way without reading the accompanying documentation. The price is right for this original piece of work by Mr. Castleton of Econoware Enterprises.

▲ ▲ ▲

```
*Welcome****(C) COPYRIGHT W. Castleton 1984...All Rights Reserved**********
**ECONOWARE OVERLAYS FOR EPSON QX- 10 WITH PEACHCALC**   Ver 1.6 June '84
*************************************************************************
**MENU** CHOOSE WHAT YOU WANT TO FIND OUT,THEN TYPE THE =?          COMMAND
         COMMAND SHOWN (right of word Type:) Press <return>        ENTRY
-------------------------------------------------------------------------
      HELP AND INSTRUCTIONS.............................   Type:    =K1 <ret>
                    DEPOSITS AND INVESTMENTS
Module 1. Future Value of a ONE TIME ONLY deposit:        Type:    =A24
       2. Future Value of a REGULAR & EQUAL deposit:      Type:    =A44
       3. Amt. of reg'lr deposit req'd to reach a goal:   Type:    =A66
       4. Amt.(one time) deposit req'd to reach a goal:   Type:    =A86
       5. Calc. effective interest rate on investm'ts:    Type:    =A106
                    LOANS AND BORROWING
       6. How much can I borrow if I can pay x amount:    Type:    =A132
       7. I need $$; how much will payments be:           Type:    =A153
                    PLANNING FOR RETIREMENT
       8. Amt. to withdraw from IRA each period:          Type:    =A174
       9. How much do I need to retire as I wish:         Type:    =A199
      10. How does inflation affect my dollars:           Type:    =A219
      11. To switch border on/off (toggle):               Type:    /GB
      12. TO QUIT,FIRST TYPE: =A4 <return>, then...       Type:    /QY
*************************************************************************
 Module   1       ***FUTURE VALUE OF AN INVESTMENT***
  This template calulates the FUTURE VALUE of a single payment investment
   for an assumed constant interest rate. Use arrow keys to place cursor
   over ( ), make numerical entry, then press <return> key.
=========================================================================
```

Tap the Graphics Power of Your QX-10 with RSIBASIC!



If you are writing Basic programs for your QX-10 with something other than *RSIBASIC*, boy are you missing out!

The Epson QX-10 is one of the most graphically sophisticated personal computers on the market, utilizing the powerful NEC 7220 graphics controller chip and 128K of dedicated video memory. ***RSIBASIC*** is the first (and *only!*) Basic to put that awesome graphics power at your fingertips!

And there's more! ***RSIBASIC's*** power is not confined to graphics capabilities. It is also one of the most *complete* Basics ever. It is *fast*, extremely *easy to use*, and it's *versatility* is unsurpassed.

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- Supports DATE$ and TIME$ functions
- Turtle graphics commands including:
  - — MOVE
  - — MOVE TO
  - — TURN
  - — TURNTO
  - — DRAW
  - — DRAWTO
- Over 83,000 bytes free
- Supports three separate display screens with screen 3 being a "window" screen allowing it to be set for screen lengths between 0 and 16 lines and overlayed on either screen 1 or 2
- Supports sound as a background task
- Multi line user definable functions
- Supports X-Y graphics including:
  - — lines
  - — circles
  - — arcs
  - — rectangles
  - — pattern-fill statements
- VPRINT allowing character strings to be displayed on the screen at various angles and sizes
- Fully supports color machines on color equipped Epson computers
- 16 character and graphics fonts including combinations of:
  - — normal
  - — bold
  - — italic
  - — compressed
  - — super/subscript characters

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(Calif Residents add 6½% tax) _____

GRAND TOTAL _____

NAME _____ TEL# (_____) _____
(area code)

ADDRESS _____

CITY _____ STATE _____ ZIP _____

MC/VISA # _____ EXP. DATE _____

SIGNATURE _____ DATE _____

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WORDSTAR

A wordprocessor for the QX and PX users

by Carolyn McCarthy

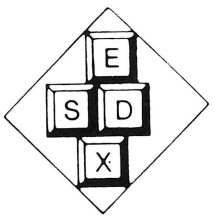
One of the most frequently asked questions has been "Should I buy WordStar?". For the QX user happy with their Valdocs editing capabilities I would say no. To those who use many different computer systems in their daily life, WordStar is a standard in the industry. WordStar has been around for a long time, and has been adapted for many different 8 bit and 16 bit computer systems, the Portable WordStar on a ROM chip for the PX-8 is another example. WordStar is not as user friendly as Valdocs, but is in fact considered friendly compared to many other word processing software packages. I find it much easier than PeachText for example.

Some benefits of using WordStar have been:

1. The files are easily transportable between a 16 and 8 bit computer. Just modem up the text file created in WordStar from one machine, to another.
2. It is extremely convenient, if you have the PX-8 which comes with WordStar on a chip, to later transfer the files to your Epson QX-10, IBM, Kaypro, Apple with CP/M, etc. Most of these articles are written on the PX, and then transferred to my QX-10.
3. Once the cursor movements are learned, the help menus become a guiding hand for doing just about anything you want to do. The "ease of use" and the fact that WordStar has been adapted to run under so many different operating systems has made it retain a number one position in the software market.
4. Stability, because WordStar has been around for so many years, most all of the bugs have been taken care of. I have yet to lose a file, an index, or have anything mysterious happen.
5. There are some features of WordStar which have been absent in Valdocs, that make it useful to people who do a lot of wordprocessing.
6. There are a lot of other software packages on the market which work specifically with WordStar. MailMerge, SpellStar, StarIndex, PlanStar, DataStar... these are also by Micropro. There are also many other programs available in which the software designers have made certain their program will work with WordStar, like Word Plus and Punctuation and Style by Oasis Systems, StarMate by Solution Technology, Bibliography by Digital Marketing, Enumerator by Orthocode, and on... There are also the public domain utilities created to help convert WordStar files for use in Valdocs, and vice versa.
7. Epson America has worked with Micropro to give us even more ease of use. The HASCIIZED version of WordStar which works with CP/M B2.0 has taken our HASCI keyboard on the QX-10 and tied in the special application keys for use with WordStar. The store, bold, italics, retrieve, ... keys do just that in WordStar. Epson East, Inc. one of the Epson distributors, created Key Advantage programs for use with WordStar. They have programs to redefine the HASCI keyboard keys, with a keyboard overlay for use with WordStar.

Now for some of the features of WordStar. This is not a "what you see is what you get" type of word processing program. In Valdocs, what you see on the screen is clean text, with invisible control codes controlling the bold, italics, returns, etc. In WordStar you must input these with control key sequences, and you will see on your screen a "^B" in front of the word you have selected to have bold, but you won't actually see the word in bold highlighted on the screen as you do in Valdocs. Both the PX and the QX have programs which allow you to assign special keystrokes to function keys. This can be very handy for saving your fingers and time. On the PX you go into the CONFIG program on the utilities ROM chip, and select CP/M function keys. You can then select a function key PF6-10, and type in either a control sequence, or string of words or characters up to 15 characters long. With the QX-10 you can use CP/M B release to set up special function keys through the SETUP menu. (Just remember that what you set up, will still be there when you exit your WordStar program).

WordStar uses a fairly standard form of movement in text commands, using the keyboard in a triangle format with control pressed preceeding the following keys:

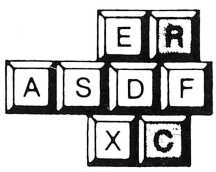


E -up one line
left one character-S D-right one character
X -down one line

Then the A and F keys, on either sid of the S and D, give movement of a word at a time:

E
left one word A(S D)F right one word
X

Scrolling further distances is accomplished with the R and C keys simultaneously with the Control key.



(E) R up one screen
(ASDF)
(X) C down one screen

Quicker movements can be accomplished with a Control Q followed by these key combinations:

E (to the top of the text on the screen)
R (To beginning of file)
X (to the bottom of text on the screen)
C (End of file)

HELP menus are displayed on the desktop computer whenever you press one of the control key combinations, with the PX you have to press the control key like control

Q, and then the system key labeled HELP to see the menu screen. To save your file you use the control K (file keeping and block handling) commands. On the PX since WordStar is on a ROM chip, you cannot store data on the ROM chip, and must log into and save your file to your RAM memory area on the A drive. You cannot save files directly to the tape drive (Drive H), they must first be saved to A, or to a disk drive, and then can be PIPed to the tape. It is important to read the section about Using the Microcassette Tape in the Portable WordStar Manual.

WordStar has convenient editing features, moving, marking, copying blocks, as well as setting up pagination, headings, and footings. The text can be justified, formatted, deleted, all with relatively easy menu directed control commands.

Printing files is very easy, and MicroPro has spent a great deal of effort providing a full installation program for specializing the program to your own printer characteristics. The portable WordStar version for the PX unfortunately does not have as much flexibility. Unless you have an Epson printer, you may have difficulty printing out your files. With the Comrex series printers we had a great deal of garbage printed out. There are some "patch" programs already available in the public domain which you can run, and will clear up most of these problems. (See the New Product section.) One program is called EP44.com and is available on the **Tape of the Month** offering from us. One should take note of the differences between Portable WordStar print commands, and those of the standard WordStar version. Control PY is used for italic print in the portable version, however this may be interpreted as commanding a letter quality printer to change the ribbon color. These differences are covered in chapter 9 for Portable WordStar for the PX.

Transferring files from the PX to a desktop computer may be handled by connecting both RS232 ports with an Epson 725 cable, and by having a compatible modem7 series, PC talk, or such program on the desktop. You will have to set the baud rates, parity, and data bits of both computers the same, then, at the command line of the program on the desktop, tell it to receive and indicate the filename. Tell the PX to send the same file; BINGO! Well, this sounds easy, but we will cover it in much more depth in a separate section on PX file tranfers. Desktop computers each have their own setup quirks and communications programs which we will step you through.

We briefly made mention of some of the other programs which work with WordStar. To give you some idea of these, and what they do we will list a few here. MailMerge (MicroPro) and MagicBind (Computer EdiType Systems) are programs allowing you to process address files into your letters written in WordStar. Version 3.3 of MailMerge allows conditional printing of letters, and Boolean operations to determine which types of letters are selected for printing MailMerge has more flexibility in printing, more printer devices are supported with MailMerge (MagicBind does not support dot matrix printers). MagicBind has some form letter related functions in addition, like previewing the effects of formatting commands, and automatic printing of mailing labels.

Spelling Checking: There are various different programs with varying features available. Super Spellguard (Sorcim), SpellStar (Micropro), and WordPlus (Oasis Systems) are a few main ones. Our own preference has been for Wordplus. You can rename the file TW.COM to SPELLSTAR.OVR and run it right within WordStar.

Punctuation and Style: This just arrived in our office. To our delight it checks punctuation, looks for errors in capitalization, missing items (quotes, parentheses, brackets), misused punctuation, and more. Style looks for phrases which are awkward, folksy, cliches, wordy, redundant, and such. These articles may become much shorter as we develop its use.

Special text handling: StarIndex (MicroPro) will produce alphabetized indexes, numbered chapters, enhanced handling of headings and references. StarMate (Solution Technology) has features which include bibliographic referencing.

Thesaurus: Random House Electronic Thesaurus (Wang Electronic Publishing) has around 60,000 synonyms. WordPlus (Oasis Systems) also has a built in Thesaurus.

Data handling: InfoStar (MicroPro is a collection of DataStar, ReportStar, and FormSort. Data Base ManagerII (Alpha Software) and FCM (Continental Software) are also data handling programs which work with WordStar. StarBurst is like an organizer for other applications you do. It integrates the different tasks through a series of menus. ReportMaker (Krepec Software) allows business users to input pie and bar charts and graphs into WordStar text files.

Spreadsheets: CalcStar (MicroPro) and SuperCalc2 (Sorcim) can swap data with WordStar, and the spreadsheets can be inserted into WordStar documents. PlanStar (MicroPro) is a financial modeling/ spreadsheet program. It provides multiple spreadsheets, analysis, equation solving and graphing. As you can see, there are a lot of options available to WordStar users. We find running MailMerge and some of these other programs on the PX-8 are nice, but you will need the added memory expansion units or the disk drive unit for true convenience.

In summary, we find WordStar is a very versatile and powerful wordprocessing software package. It doesn't have all the "bells and whistles" of MicroSofts WORD, and added ease of use found with Rising Star Industries' VALDOCS but it may be just what you have been looking for.

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VALBOTS

by Carolyn McCarthy

This is a continuing short adventure story, any similarity between these characters or beings, to persons and incidents in real life are purely coincidental and intended. Valbots began as a series in our July 1984 issue as part of the anticipation of The Rising Star Industries, Valdocs Version 2.0 release. TP, the main character has journeyed far in a search for 2.0. In the last episode TP was directed to seek help from the Wizard in Valtopia. Following the yellow Baud road, TP has been joined by three friends — Henry Asci, Valbot, and CRT. They have reached the gates of Valtopia and gained entry into the city.

Upon entering the gates to the city of Valtopia, three elves introduced themselves as the Wizard's helpers, De, Mx, and Ba. The elves led TP's group through a carefully guarded maze. As they proceeded through the maze they noticed a sensation of enervation. They no longer noticed how tired they were, they felt a warmth radiating from somewhere ahead of them. Suddenly they found themselves in a tropical space, with palm trees, small ponds filled with unusual golden forms moving to and fro, and warm light surrounding them. There were forms of various shapes and sizes, each unique, moving all around. The forms seemed to be extensions of some invisible force. TP asked the Wizard's helpers what these forms were. De responded that they were the **Codehackers of Valdoz**. Henry seemed to give this much thought, and finally took hold of one of the buttons on his coat, and pressed the one labeled HELP. "Codehacker is a subspecies of Programerus, most commonly found near green tuberous growth called cathode ray tubors, they respond well to a nutrient called forthus. The Codehacker will attempt to control the central processor and peripheral elements in his environment. They have been known to be afflicted by a disease known as codus impotentus (and occasionally codus interruptus), but when the bug is discovered and killed, a period of elevated activity and quick recovery follows."

Suddenly all movement ceased, and a silence was experienced. Mx whispered that they were being honored with a visit from **RA** The Great Codehacker of Valdoz. They waited until RA had passed by, Ba said "He is always busy, and is still working..." The group then proceeded forward. At last they entered a clearing.

A voice filled the space, "What you seek shall be found. You must first demonstrate your belief in Valdoz, and rise like a star above all other integrated systems, and above all else you must avoid the Valblahs. This is an easy task if you follow the right path, and press the right keys. Your path is clearly marked. Your task should you choose to accept it, is to: conquer the Inferior Bigness Mogul. You may encounter traps, and will have to resist temptations placed in your path. You must not be distracted by offers of fruit. Oranges and Apples will only be momentary fulfillment, what you seek is far more fulfilling, encompassing and integrated." The clearing became dark and TP and friends suddenly found themselves inside a dark cave. They carefully felt their way along the cave, heading upward through the darkness. They could hear the rushing of an underground stream in the distance behind them. Gradually they heard some music in the direction they were traveling. What would a Symphony be doing here in a cave? Perhaps it was just their imagination. Continuing upward they could now make out voices singing. It sounded like... no it just couldn't be... They rounded a corner, and in front of them were seven little men, dwarf-like in appearance singing as they worked. "I/O, I/O, it's off to work we go." The dwarfs stopped as they sighted the strangers. CRT stepped forward and said, "Don't be afraid, we are searching for the secret location of the Inferior Bigness Mogul. Can you help us?"

"I think I have the right address here," spoke up the dwarf called .DOC. He reached into his pocket and as he brought it forth, another dwarf reached for the paper saying "Here let me help..." but it ripped. .Doc grabbed it back, and by the time they were done it was torn into 16 bits. "Boy, what a dope you are," .Doc said to the clumsy dwarf. They all pitched in together to integrate the parts.

Suddenly the cave was warmed by a bright light, and A voice came from above."You have learned the first important lesson: working together for better integration is one part of your task." TP and his friends then found themselves in the middle of a jungle. In front of them were some people clustered around something on the ground. They were exclaiming and gesturing wildly. TP and friends drew near.

"What do we do with it?" "How do you open it?" "Look at all these documents, will you?" "What do you suppose we are supposed to do with these F1... F2... F3...?" On the ground was the Inferior Bigness Mogul Machine. Suddenly Valbot knelt down, Henry Asci in front of him, CRT climbed up on Valbot's back and a flash of light like lightning lit the sky. TP's friends were transformed into a united and integrated unit. TP called out to the group, "Come here, I have something to show you." They approached cautiously, TP said, "Put those books down you don't need them, watch." He then pressed the button on Henry Asci which said HELP. CRT lit up and said, "I will be pleased to HELP you whenever you need help." The explorers sighed, "This is wonderful." In the background behind them, the form that had been the center of their attention began to fade and shrink.

TP continued to press the keys on H. Asci until they were shown delights beyond their wildest dreams. Leaving the excited group behind with the integrated unit TP felt alone. He still had many questions for the Wizard. How soon would the whole world be integrated ? would the world become more colorful ? What about... TP eagerly began the journey back to the Wizard's palace. There was so much yet to discover. Stay tuned as TP is comforted by two very lively characters, in "TP Meets CAD & CAM."

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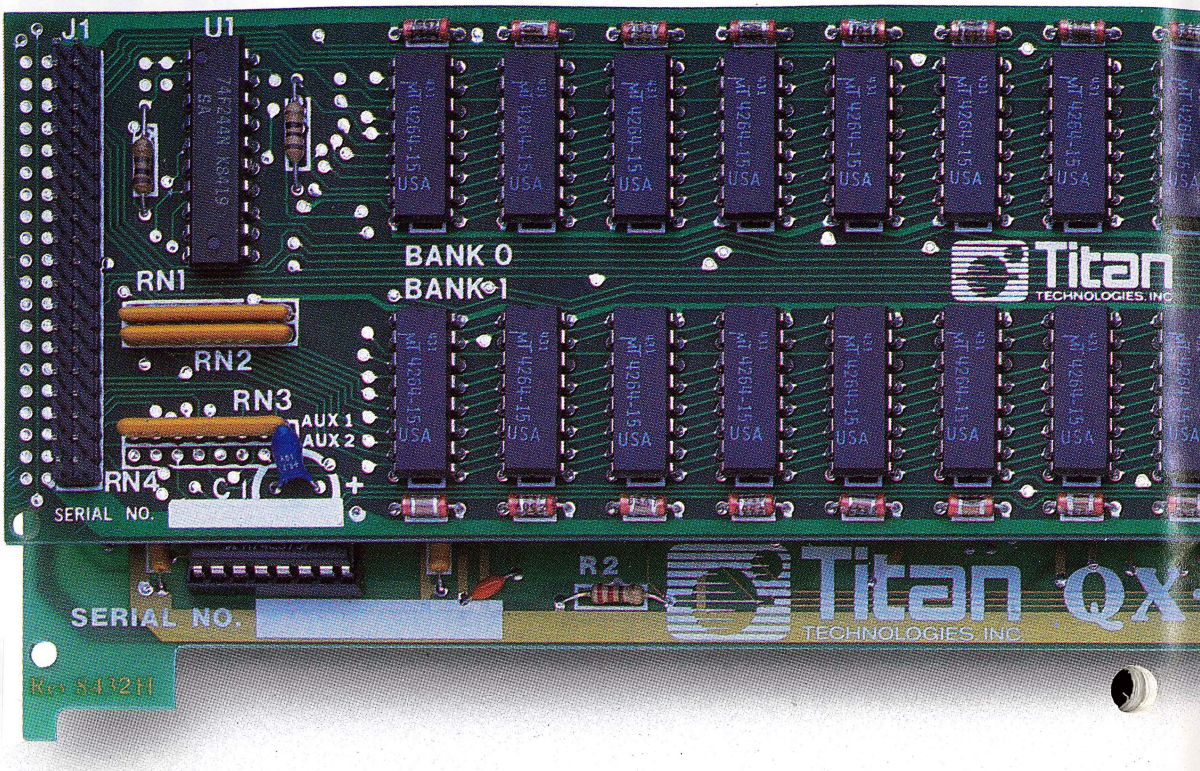

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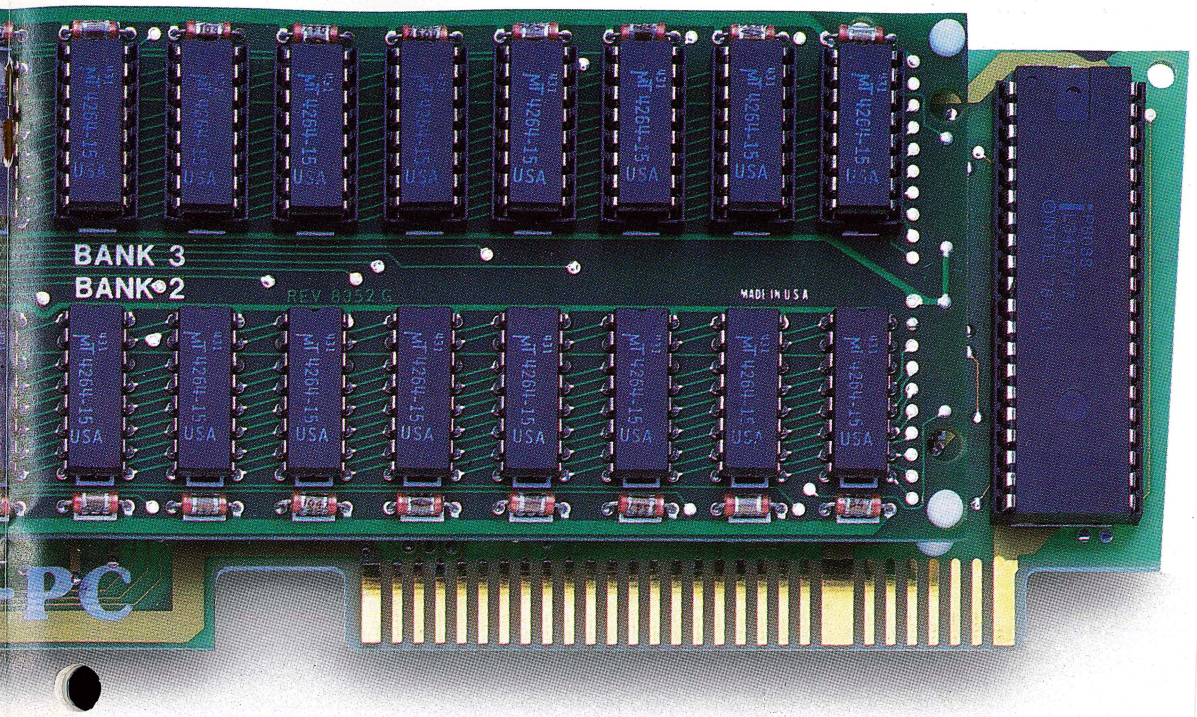

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OPERATIONS MANUAL

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TITAN TECHNOLOGIES TESTED SOFTWARE LIST FOR THE NEW "QX-PC"

(MS-DOS CO-PROCESSOR BOARD INSTALLED IN THE EPSON QX-10)

EFFECTIVE DATE: OCTOBER 2, 1984

Here is a list of programs now on the market that have been tested by TITAN TECHNOLOGIES, Inc., by independent software test firms, or by both. All the programs tested are the IBM PC versions of the software and some may have specific hardware and/or software requirements to function properly.

TITAN TECHNOLOGIES, Inc. will continue to evaluate Top-Selling software programs for compatibility with the NEW QX-PC MS-DOS CO-PROCESSOR BOARD.

This list in no way constitutes a guarantee of the complete operating efficiency of, or an endorsement of, any particular program, for any particular purpose, by TITAN TECHNOLOGIES, Inc.

ACCOUNTING & BUSINESS MANAGEMENT

PROGRAM/Publisher

1. ACCOUNTS PAYABLE/BPI Systems, Inc.*
2. GENERAL ACCOUNTING/BPI Systems, Inc.*
3. GENERAL LEDGER/Peachtree Software, Inc.**
4. INVENTORY CONTROL/Peachtree Software, Inc.**
5. PAYROLL/Peachtree Software, Inc.**
6. HARVARD PROJECT MANAGER/Harvard Software

COMMUNICATIONS

7. CROSSTALK XVI/Microstuf, Inc.
8. SPREADSHEET LINKS/Dow Jones & Co., Inc.
9. PFS ACCESS/Software Publishing Corp.
10. PC-TALK III/Freeware

DATABASE

11. DATA BASE MANAGER II/Alpha Software Corp.
12. dBASE II/Ashton-Tate
13. dBASE III/Ashton-Tate
14. FRIDAY!/Ashton-Tate
15. PFS FILE/Software Publishing Corp.
16. PFS REPORT/Software Publishing Corp.
17. RBASE 4000/Microrim, Inc.
18. OMNIFILE/SSR Corporation
19. DATAPLUS-PC/Professional Software, Inc.

EDUCATIONAL/RECREATIONAL

20. FLIGHT SIMULATOR/Microsoft****
21. ZORK I/Infocom, Inc.
22. TRIVIA FEVER/Professional Software, Inc.

FINANCIAL

23. THE HOME ACCOUNTANT/Continental Software Co.*
24. MANAGING YOUR MONEY/Micro Education Corp. of America
25. TAX PREPARER/Howard Software Services*
26. REAL ESTATE ANALYZER/Howard Software Services*
27. TAX DECISIONS/Eagle Software Publishing*
28. MONEY DECISIONS/Eagle Software Publishing

INTEGRATED PACKAGES

29. 1-2-3/Lotus Development Corp.**
30. SYMPHONY/Lotus Development Corp.**
31. OPEN ACCESS/Software Products International**
32. FRAMEWORK/Ashton-Tate

SPREADSHEETS

33. SUPERCALC II/Sorcim
34. SUPERCALC III/Sorcim
35. VISICALC IV/Visicorp
36. ADVANCED VISICALC/Software Arts, Inc.
37. MULTIPLAN/Microsoft
38. FLASHCALC/Visicorp

SYSTEMS, UTILITIES, & LANGUAGES

39. GW-BASIC
40. BASIC COMPILER/Microsoft
41. TURBO PASCAL/Borland International
42. PROKEY/RoseSoft
43. CP/M 86/Digital Research
44. THE NORTON UTILITIES/Peter Norton
45. C-COMPILER/Microsoft
46. MACRO ASSEMBLER/Microsoft

WORD PROCESSORS, SPELLING CHECKERS, & MAILING LISTS

47. WORD/Microsoft***
48. VOLKSWRITE DELUXE/Lifetree Software, Inc.
49. PFS WRITE/Software Publishing Corp.
50. MULTIMATE/Multimate International
51. WORDSTAR/MicroPro International Corp.
52. SPELLSTAR/MicroPro International Corp.
53. MAILMERGE/MicroPro International Corp.
54. EASYWRITER II/Information Unlimited Software, Inc.
55. BANKSTREET WRITER/Broderbund
56. WORDPERFECT/Satellite Software, Inc.
57. WORDPLUS-PC/Professional Software, Inc.

* Requires BASIC.

** The following programs passed the evaluation procedure by setting up the QX-PC System under the following configurations:

—Configured for the Eagle PC
GENERAL LEDGER/Peachtree Software
INVENTORY CONTROL/Peachtree Software

—Configured for the Compaq
PAYROLL/Peachtree Software
SYMPHONY/Lotus Development Corp.

—Configured for the IBM PC with Monochrome
OPEN ACCESS/Software Products International

—Optimized for the IBM PC with BOTH Monochrome & Color
1-2-3/Lotus Development Corp.

*** You cannot use the <CONTROL-SHIFT-RETURN> sequence to start a new page, (this will reboot the system). You cannot copy the WORD program over to the Hard Disk. Attempting to do so will cause irreversible damage to both the program on the diskette and the program copied to the Hard Disk.

**** Runs too slowly to operate properly.

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WordStar is a registered trademark of Micropro International Corporation.
IBM PC is a registered trademark of International Business Machines Corporation.
Valdocs is a registered trademark of Rising Star Industries.
CP/M is a registered trademark of Digital Research, Inc.
MS-DOS is a registered trademark of Microsoft Corporation.

The QX-PC is an official Titan Technologies product. For more information, call Titan at (313) 662-7777 or contact your local Epson dealer.

NEWS NOTES

Con't from pg. 6

*NEW CP/M

› NEW! IMPROVED! and all that Jazz. CP/M-80 B 2.25 is the latest release of HASCI enabled CP/M for the Epson QX-10 presently supplied with the QX-10+. No plans have been announced yet for distribution to present QX-10 owners.

› If you liked CP/M-80 version B, you will like this a lot better. The screen displays are changed so that they are easier to use. By pressing the 'menu' function key a menu of utilities is displayed. One of the most useful utilities is the ability to call up Valdocs, insert the Valdocs system disk in the left drive, press return, and you are in VALDOCS. This version of CP/M allows one to tell the printer to print condensed, expanded, emphasized, italics, elite, skip perf, and more. Also installs a screen dump to either the Comscriber Plotter of the new Epson HI-80 Plotter.

› Additional utilities are; HDPART, which enables a hard disk to be partioned so that both Valdocs and CP/M can reside on the Comrex Comfiler: ARCHIVE, a hardisk backup program. PFK allows additional programming of function keys. Some of the keys are programed for WordStar, MicroPlan, GraphPlan, and some of the CP/M functions. QX-FILINK enables file transfers between the QX-10 and the PX-8.

QX CLOCK

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- *Lines, arcs, circles, rectangles*
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- *log/polar coordinate systems*
- *multiple and split screens*

And **complete** source code is included. The price? Just $50 US. Orders must be prepaid with check or money order payable to:

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(As a special introductory offer, if you order before Dec. 31, 1984 you may also purchase our MicroRAM/QXKeys package for only $15.)

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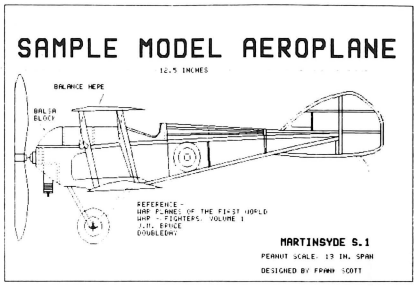
QXDRAW

Con't from pg. 7



There was only one problem with this. When you begin drawing and intend to store it as a figure (as opposed to a full screen save), you must be in the FIGURE mode. Just simply hit the "F" key, and the command line at the bottom will then display "Figure". Many times I forgot to enter the "F" mode, and halfway into a drawing I realized that my work had to be stored as a "screen save", which requires much more disk space and, most unfortunately, disables it from being retrieved again at any different size.

Another "nice and easy" feature is the "P" (paint) command. Simply place a dot (by hitting the "5" key) inside the area to paint, then hit the "P" key. QXDRAW will proceed to fill in the area.

I have just scratched the surface of the abilities of QXDRAW. For all its capabilities and fantastic QX-10 resolution, perhaps the best combined feature is the performance with the price. (And by the way, it does allow you to print your drawings to the printer).

If you are looking for more involved features, such as animation and interfacing graphics with MBASIC, then QPLOTTER by Metro Software may be more for you, however, it is more expensive also.

QXDRAW is an excellent and inexpensive program that can do a lot of graphic drawings and is very easy to use.

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UNIX to QX

Con't from pg. 11

filename' command. Doing the transfer in this way permits editing of the text with the nasty old UNIX editor, before it gets written to a file. The other way is much more elegant, and you can do all editing on the Valdocs editor, VIVA VALDOCS!

QXMODEM FEATURES WITH UNIX

While working out this procedure, I discovered some very interesting features of the QXMODEM program. Notice above that the QX-10's STORE key can be used to send a CTRL D to the other computer. Most of the other function keys will also do things, and they are not interpreted as local commands by QXMODEM. Which means that you can send the distant computer most of the local control commands, CTRL B, E, L, N, P,or T, without first hitting CTRL Z, or toggling the local control option (TLC). These keys are the ones I have found so far.

KEY	HEX	NAME	FUNCTION
STOP	-	-	- (may be a null)
HELP	h01	soh	CTRL A
COPYDISK	h02	stx	CTRL B
UNDO	h03	etx	CTRL C
STORE	h04	eot	CTRL D (end of transmission)
RETRIEVE	h05	enq	CTRL E
PRINT	h06	ack	CTRL F
INDEX	h07	bel	CTRL G (bell)
MAIL	h0c	np	CTRL L (form feed to printer)
MENU	h08	bs	CTRL H (always backspace)
CALC	h09	ht	CTRL I (horizontal tab)
SCHED	h0d	cr	CTRL M (carriage return)
DRAW	h0b	vt	CTRL K
KEY	HEX	NAME	FUNCTION
BOLD	h0e	so	CTRL N
ITALIC	h0f	si	CTRL O
SIZE	h10	dle	CTRL P
STYLE	-	-	-
MAR REL	h1b	esc	ESCAPE
< X]	h7f	del	RUBOUT (default of QXMODEM)
< X]	h08	bs	CTRL H (option TRB in QXMODEM)
[X >	h14	dc4	CTRL T
LINE	h15	nak	CTRL U
INSERT	h16	syn	CTRL V
WORD	h17	etb	CTRL W
TAB REL	-	-	-
TAB SET	h12	dc2	CTRL R
UP ARROW	h1c	fs	??Guessing UNIX doesn't like
LT ARROW	h1d	gs	Cursor left
RT ARROW	h1e	rs	Cursor right
DN ARROW	h1f	us	Cursor down

Note: The last four keys (arrows) don't work properly as cursor controls in the UNIX line editor 'ed'. They may work in a full screen editor, if your QX-10 is properly defined to UNIX. I haven't gotten that far yet.

Al Braley
Bell Communications Research Inc.
435 South St. Room 1F-241
Morristown, NJ 07960

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NEW PRODUCTS

Con't from pg. 10

QX: Post-by-Phone Phone Plus

This communications package allows the QX-10 to communicate via modem to mainframes. Extensive documentation allows the user to tailor their needs to a wide variety of mainframes. The suggested retail price is $250. Contact: MCTELL, Inc., Suite 305, 3 Bala Plaza East, Bala *Cynwyd PA 19004.

QX: Custom Software and Programing

This Entrepreneure guarantees satisfaction of his customized software. He will write a program to do exactly what you want, and if you are not 100% satisfied, there is no obligation to buy the program. He also offers several general software packages:

FINANCIAL PROBLEM SOLVER: provides loan calculations for $30.

INVENTORY: A specialized database allowing for up to 32,000 records with the following fields: part ID, description, source, quantity, reorder level, cost, and 2 prices. Modules for file maintenance, transaction entering, and building reports are included in this program which sells for $100.

FONT: allows access to all the typestyles of an Epson printer under CP/M, or Valdocs for $20 and $25, respectively.

GRAPHICS: is available in configurations for CP/M, Qplotter, or RSI Basic and costs $10-$35.

GAMES: For prices ranging from $10 to $35. All of these services are offered by: Rand Baldwin, Franks Computers, 562 North Broadway, Coos Bay OR 97420.

QX: Compu/CHART

Advertised as the only market level stock charting program that operates under CP/M, and which does not require graphics capability, this program is not dependent on expensive database or online fees. It instead relies upon daily user input. Its capabilities include: plotting three moving averages, re-computing them with each new entry; allows trial entries; uses the entire 80-column screen to plot the action of 73 trading days; and it marks the last trade level. It can create any number of data files and will print hard copy for the last 56 trading days. It can also scale any range of values automatically and compare up to four different stocks. Suggested retail price is $99.95. Contact: NewTek Industries, P.O. Box 46116, Hollywood CA 90046.

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DSK-62	10 MEG full height drive	$2499.00	**$2125.00**
DSK-63	16 MEG full height drive	$2799.00	**$2379.00**
DSK-64	20 MEG full height drive	$2999.00	**$2549.00**
	DSK-8 series comes with 5 MEG DSK-8X backup sys. installed.		
DSK-82	10 MEG full height drive	$3799.00	**$3229.00**
DSK-83	16 MEG full height drive	$4099.00	**$3689.00**
DSK-84	20 MEG full height drive	$4299.00	**$3869.00**
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DESCRIPTION	COST
VersaReivables: Menu driven, automatic billing, prints statements, invoices, reports, tracks accounts and much more!	**$99.95 ITEM# VR-1**
VersaPayables: Tracks current & aged payables, prints checks, vouchers, registers, reports... and much more!	**$99.95 ITEM# VPA-1**
VersaPayroll: All necessary payroll calculations & government requirements are performed automatically. Operator can alter information easily via screen displays and perform sophisticated functions that were until now limited to more costly software.	**$99.95 ITEM# VPY-1**
VersaInventory: A complete inventory control system, auto tracking of all stocking, backorder sales, pricing and reordering information. Prints invoices, listings, reports, price lists and lots more.	**$99.95 ITEM# VI-1**
VersaLedger: Handles 2400-10,000 entries per month, stores all check & ledger information forever. Prints track or feed checks, handles multiple checkbooks & ledgers, prints 17 customized accounting reports and a whole lot more. All software comes with sample printouts, manuals, and step by step instructions. Even an inexperienced user can achieve professional results in just one afternoon.	**$149.95 ITEM# VL-1**

OR BUY THE ENTIRE 5 PACKAGE SYSTEM -
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ADDITIONAL SOFTWARE FAVORITES

DESCRIPTION	LIST	YOUR COST
D BASE II (Ashton Tate)	$700.00	**$415.00**
FRIDAY (Ashton Tate)	$295.00	**$265.50**
PERSONAL PEARL (Pearlsoft Systems)	$295.00	**$265.50**
PEARL LEVEL III (Pearlsoft Systems)	$495.00	**$445.50**
WORDSTAR/SPELLSTAR (Micropro)	$695.00	**$625.00**
WORDSTAR PROFESSIONAL (Micropro)	$695.00	**$625.00**
INFORSTAR (Micropro)	$495.00	**$445.00**
STANDARD TAX (CP Aids)	$595.00	**$535.00**
MICROPLAN (Chang Labs)	$495.00	**$445.00**
CIS COBAL (Microfocus)	$850.00	**$722.00**
BASIC COMPILER (Microsoft)	$395.00	**$355.00**
COBOL 80 (Microsoft)	$700.00	**$630.00**
FROTRAN 80 (Microsoft)	$500.00	**$450.00**

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Q PLOTTER SOFTWARE
(Look for the rave review in July's Epson Connection)

Q PLOTTER & AMDEK PROFESSIONAL 100 XY DIGITAL PLOTTER PKG.:
10" x 14" Range on paper or film, 3 pen unit (non automatic), standard parallel interface accepts ASCII codes. Just plug into your QX-10 printer port, load up your Q Plotter and start creating.
ITEM # CAD-1 LIST $1000 **SUPER SPECIAL! BOTH FOR $ 599.97**

C.A.D. + SPECIAL

Q PLOTTER & AMPLOT II PKG:
Same as above except plotter is 6 pen automatic, built in arc-circle & windowing software. Has both serial & parallel interface.
ITEM # CAD-2 LIST $1350 BOTH FOR **$1125.00**

SINGLE PRICES:	Q PLOTTER		**$ 250.00**
	100XY PLOTTER (#AD-1)	(LIST $750)	**$ 425.00**
	AMPLOT II (#AD-2)	(LIST $1100)	**$ 900.00**

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Designed for demanding office conditions. Heavy duty double daisy wheel & has both parallel & serial interfaces.

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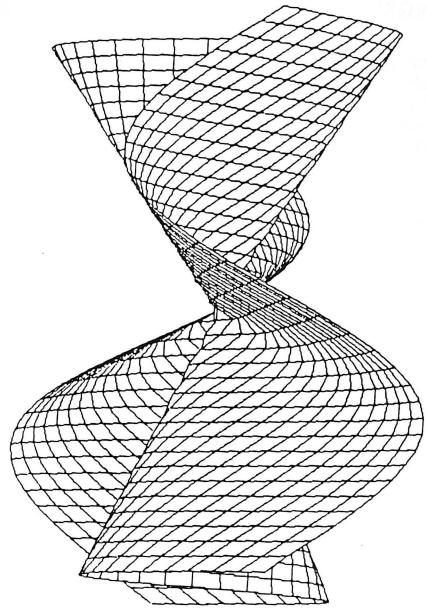
Software Review

DOSPLUS IV

by George G. Puckett, Jr.

SPEC SPOT

Product: DosPlus IV
Type: Operating System
Computer: Epson QX-10
Price: $169
Ease of Use: Not terribly difficult; however, the more experience you have with different operating systems, the easier DosPlus IV is to master.
Performance: Good
Documentation: Very Good
Summary: A powerful yet affordable tool for the Epson Owner with experience.
Manufacturer:
Micro Systems Software, Inc.
4301 18 Oak Circle
Boca Raton, FL 33431



The **DOSPLUS IV** operating system, created for the TRS-80 Model 4, is now available for the Epson QX-10. The list of features for this operating system reads like a Christmas wish list: UNIX-like "piping" of data to and from printers, CRT's, files, and other programs; customization of the operating system; multi-level file passwording; menu driven, user-friendly DOS interface; an "INDEXER" like program for file copying, renaming, and transferring; a sophisticated Job Control Language for batch file processing. These, and many others, are just some of the features of this versatile operating system. In addition to this, Epson users gain access to a very sophisticated enhanced BASIC as well as the very large library of programs available for the TRS-80 series of computers all at the very reasonable price of $169.95 (EC July 1984).

Now let us take a look at some of the features in more detail. As a professional programmer, I can really appreciate the features of the enhanced BASIC included in the DOSPLUS IV package even though it is not completely Microsoft-BASIC compatible; important if you want your programs to be transportable to other microcomputers. These enhancements consist of:
(1) Short-hand statements which allow the programmer to more rapidly create bug-free programs (2) A cross-referencer which allows a program to be listed by variables, line-numbers, or keywords (3) An editor which allows global searching for and/or replacing of user-defined strings (4) A very fast system sort routine, which any programmer using keyed-access files will quickly appreciate (5) The capability to use English labels along with line numbers to control program flow; a tremendous aid to quality, structured programming (6) Simple, full-screen cursor control.

The **DOSPLUS IV** operating system, is a well thought out and comprehensive unit. The following is a summary of Library commands from the manual:

APPEND	Append two devices or files together
ASSIGN	Install a driver routine
ATTRIB	Alter files' attributes
AUTO	Set auto execute command
BOOT	Execute system "cold start"
BREAK	Disable/Enable BREAK key
BUILD	Create ASCII text file
CAT	Display drive's file catalog
CLEAR	Clear user memory and files
CLOCK	Turn on/off system clock display
CLS	Clear screen
CONFIG	Alter system configuration
COPY	Copy device/file to device/file
CREATE	Create and pre-allocate disk file
DATE	Display or change system date
DEBUG	Activate system memory monitor
DIR	Display detailed file listing
DO	Execute command chain file
DUMP	Save memory to disk file
ERROR	Display detailed error message explanation
FILTER	Filter I/O to/from specified device
FORCE	Re-direct I/O to device/file
FORMS	Alter printer pagination parameter
FREE	Display free space data
I	Initialize disk drive
JOIN	Link two logical devices
KILL	Kill specified device or file
LIB	Display list of Library commands
LINK	Link two logical devices
LIST	List file to device
LOAD	Load disk file into memory
PAUSE	Pause execution
PROT	Alter disk's protection status
REMOVE	Kill specified device or file
RENAME	Rename a device or file
RESET	Restore device to default driver
ROUTE	Re-direct I/O to device/file
RS232	Display/alter serial port settings
SCREEN	Send contents of screen to device
SYSTEM	Customize your operating system
TIME	Display time or set system clock
VERIFY	Toggle automatic disk verification

With all the nice features mentioned above, there are literally

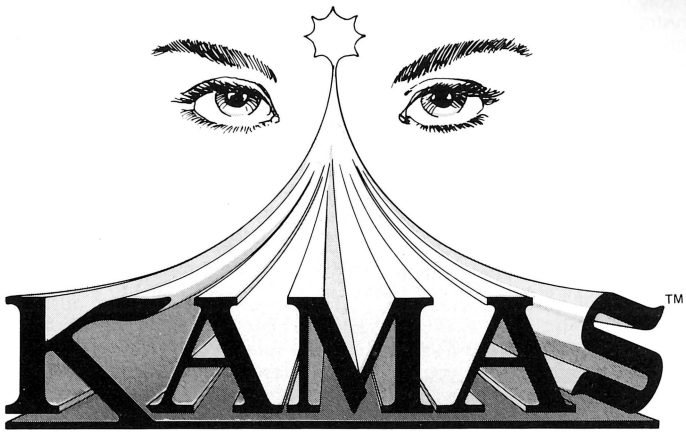
DOSPLUS IV

dozens more we simply do not have room to list. I do; however, want to mention a few limitations of the DOSPLUS IV system that could possibly give you trouble. These features are not actually problems with the DOSPLUS IV operating system, but simply refer to problems with learning and using any operating system other than Epson's CP/M operating system. The user is going to have to become familiar with an entirely different operating system and terminology. For example, disk space is recorded in units known as "granules" and disk tracks are referred to as "cylinders." One drawback is the incompatibility of files created under the different operating systems. A text file created using Valdocs or Peachtext under CP/M cannot be read or accessed while using DOSPLUS and vice versa. All this adds up to the fact that this package is not, in my opinion, for the novice. The extended features do make it a serious candidate formore experienced user.

Two other software packages are included with the DOSPLUS IV system. They are the very flexible telecommunications program MTERM (almost identical to the Epson version of MTERM) and a text editor called MSCRIPT.

If you feel you're more experienced than the average Epson owner, and not afraid to learn a whole new operating system, then DOSPLUS IV has some very useful features which would make a welcome addition to your software library at a price you can afford.

▲ ▲ ▲



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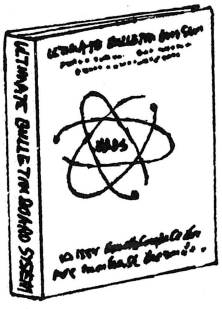

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Free Offer

If you use CP/M programs on your Epson, SmartKey II can save you thousands of tedious keystrokes. SmartKey II is the software program that is taking the computing world by storm. Peter McWilliams, William Buckley, and others rave about how SmartKey II speeds up and improves accuracy in computing by eliminating boring and repetitious routines.

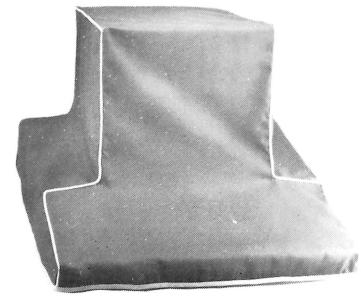
Smartkey II lets you easily reprogram as many upper and lower case keys on your keyboard as you want, even while your other software — such as Peachtext, WordStar, dBase II, etc., — is in operation.

Uses for this powerful, easy to operate program are endless. With SmartKey II you can assign up to 3,750 characters to a single key. Once you have redefined keys, you can put them to work or change them at will. You can also store your "smart key" definitions in a special file and use them later, or make numerous definition files to use with a variety of your favorite programs or projects. Imagine saving complex command codes, boilerplate paragraphs, sentences, proper nouns, inventory numbers, or whatever, and then injecting any of them into your work with the stroke of a single key. This is a must-have, time saving computer program for all QX-10 users. SmartKey II can even make your Epson's HASCI keys come alive and be productive in CP/M programs.

SmartKey II has a little known super companion program called SmartPrint II. SmartPrint II retails at $49.95. SmartPrint lets you give single-stroke commands to your dot matrix printer to make it produce italics, greek characters, graphic symbols, boldface, underlining, extended typefaces, accent marks, and much more. SmartKey II retails at $89.95. Now, for a limited time only, Central's price for a combination SmartKey II and SmartPrint II pack is only $89. In addition, as a bonus, with your purchase you will receive a free copy of Paul Golding's book, *Screen Smarts, The Computer Tamer's Guide*. This book is a $15.95 value. It tells how Mr. Golding, a professional writer, uses SmartKey II to turn his humble computer into a supercharged dedicated word processor. Please don't delay, this offer may not be repeated. Order today to get SmartKey II, SmartPrint II, and a free copy of *Screen Smarts, The Computer Tamer's Guide*, fast.

Introducing A Classic Form Fitting Epson Cover

Photo: Form-fitting cover over CPU, monitor, and keyboard.



At last, the classic Epson dust cover you'll be proud to own and use. This first rate computer cover is made from a premium, lint free, static free, washable, free breathing, and fade resistant sailcloth. It comes in a rich looking Navy blue or Sand. The Navy cover has a smart contrasting silver gray piping and trim that adds a superior finished look. Not to be outdone, the Sand cover is handsomely finished in a rich chocolate piping and trim.

This remarkable form-fitting dust cover makes you feel good and will keep your Epson dust free and looking brand new for years to come. For a limited time only, your price for this factory direct, custom made, sailcloth Quality Cover is $18.95. When ordering remember to indicate color preference. This special low price is subject to change. You must be completely satisfied with your purchase of this cover or we will refund your money immediately. Order today.

Matching sailcloth covers for all Epson and ComRiter printers: $15.95.
New. Special 2-piece QX-10 sailcloth cover protects monitor and CPU, and keyboard. $21.95 per set.

- Quality tailoring
- Easy care fabrics
- Attractive colors
- Professional appeal

Richly tailored inside and out. Look inside any of our Quality Covers; see the ultimate finishing; we use machines that sew with 3 needles so that edges will not unravel or shed lint. We stress perfection because you deserve the best. Compare for long-lasting satisfaction.

FACTORY DIRECT

Letter Quality

Say goodbye to correspondence qual
high-resolution, proportionally spa
Font provides fonts in sizes from
Roman, Bold, Italic, Script, Old En
low-cost Epson (MX, RX, FX) and
Font is an easy-to-use software pa
compatible systems; no special hardv

Actual sample produced by an MX-80 and Fancy Font.

Incredible Printing Machine

Your Epson printer is going to get even better. *Fancy Font* can make it into an incredible printing machine. The *Fancy Font System* is a software program that turns the bits and bytes generated by your computer into over 30 font sets in sizes from 8 to 40 points that can be printed on any Epson MX80 with Graftrax, Epson FX or RX printer, or Gemini 10X printer.

Fancy Font styles include Roman, Bold, Italic, Script, Old English, and more. In addition, custom forms, invoices, labels, signs, foreign languages, mathematical notations, view graphs, resumes, newsletters, brochures, complete manuals, invitations, place cards, and high-resolution, proportionally spaced, letter quality business and personal letters can all be printed on your Epson printer with *Fancy Font* at the helm. *Fancy Font* is a product of SoftCraft Inc. You may have seen SoftCraft's national ads. They are printed with *Fancy Font* on an Epson printer. The ad is powerful visual medicine. The list price for the fully documented *Fancy Font System 2.0* is $180. Central's price is only $149. Order *Fancy Font* today and add an amazing sparkle of creativity to all your printed materials. Please indicate name and model of your printer when ordering. *Fancy Font* will make your Epson printer and Valdocs or CP/M word processor come alive. It's magical.

The Epson can dump a file faster than a printer can accept it. So, it's great to have a device that will catch the file, quiet the disk drives, and give the computer back to you.

CONSOLINK MICROSPOOLERS

Description	List	Price
64 K P-P	$315.00	$279.95
64 K P-S	$343.00	$299.95
64 K S-S	$349.00	$299.95
64 K S-P	$339.00	$299.95
Cables	$ 54.00	$ 29.00

64 K	Stores and spools files as large as 64 K.
P-P	Parallel Epson port to parallel printer port.
P-S	Parallel Epson port to serial printer port.
S-S	Serial Epson port to serial printer port.
S-P	Serial Epson port to parallel printer port.
Cables	Set includes one special male to female connector and one male to male connector. — Please tell us model and type of printer you're connecting to your computer.

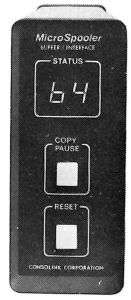


Photo: MicroSpooler 64 K P-P

Includes these unique features:

- Status digital readout
- Multiple copy function
- Temporary pause function
- Sleek internal power supply
- Comprehensive self test routine
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- Front panel reset
- 12 month factory guarantee

Stop Tearing Up Your Disk Drives

If you're using your Epson as a printer buffer instead of a computer, you may be tearing up your disk drives. Disk drives are mechanical devices, they are often the first parts of a computer to go sour. No wonder. Everytime you feed your printer a file, the drives whirl madly until the printer has accepted the entire file. Sometimes this takes a long, long time.

If you're tired of hearing your disk drives grind down, you need a printer buffer. The best performance and price buffer on the market is the Consolink MicroSpooler. This computer-like tool absorbs files as fast as your computer can send them, and then patiently feeds or spools them to your printer a few bytes at a time.

The MicroSpooler is an intelligent, feature-packed buffer. It is easy to install and operate. Merely place it between your computer and printer, then connect it with two cables, and feed files as large as 64K within seconds to your letter quality or dot matrix printer. The instant the transfer is complete, you can operate your computer again. The MicroSpooler does the rest.

The MicroSpooler comes in a variety of configurations. You can link your Epson to any popular printer with two inexpensive cables. Please check our low MicroSpooler prices. You won't find a more feature-packed or reasonably priced spooler around. Try the MicroSpooler of your choice for 15 days. If you are not completely satisfied with your purchase, return it for an immediate full refund. Your Epson deserves this attractive and useful accessory. Order a compact and powerful MicroSpooler today.

Lockable Diskette Defender

Handsome, sturdy, smoke-tinted acrylic tray holds 70 Epson-size diskettes. Flip-up lid keeps out dust, debris, and moisture, and locks securely to guard your important work. Comes with 7 dividers with index tabs for easy filing and to keep floppies upright to prevent bending, warping, and scratching. Tough and secure metal lock never comes in contact with diskettes because it is enclosed in a special plastic housing. Super value at $22.95 for one, or $21.00 each if you buy 2 or more. Keep prying eyes and sticky fingers away from your data. Order today.

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Compare and save. Epson's LQ 1500 ribbon gives you 3,000,000 characters. Our top quality LQ 1500 ribbon produces 4,500,000 characters. Epson's list price is $17.50 per ribbon. Our price is $49 for box of six ribbons. In stock. Order today. Complete Satisfaction Guaranteed.

Central Toll Free Order Desk

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CP/M Prod. Description	List	Central
QX-10 Software		
ASHTON TATE		
dBase II	$495.00	$368.00
ATI TRAINING DISKS		
CP/M	$ 39.95	$ 37.00
MBasic	$ 39.95	$ 37.00
Multiplan	$ 75.00	$ 62.00
SuperCalc	$ 75.00	$ 62.00
Wordstar	$ 75.00	$ 62.00
BORLAND INTERNA		
Turbo Pascal 2.0	$ 49.95	$ 48.00
CDE SOFTWARE		
Checks & Balances	$ 74.95	$ 69.95
CONTINENTAL SOFTWARE		
Home Accountant Plus	$ 99.95	$ 79.95
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Datebook II	$295.00	$228.00
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Deadline	$ 49.95	$ 47.00
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SpellBinder	$495.00	$299.00
MICROPRO		
WordStar	$495.00	$375.00
WordStar & MailMerge	$645.00	$495.00
InfoStar	$495.00	$399.00
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MultiPlan	$195.00	$155.00
MBasic Compiler	$395.00	$299.00
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The Word Plus	$150.00	$105.00
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Personal Pearl	$295.00	$225.00
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Perfect Writer	$349.00	$299.95
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Q-Pro-4 with multikey file indexing	$595.00	$395.00
SAN FRANCISCO COMP		
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Eliza	$ 24.95	$ 23.00
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T/Maker III	$275.00	$199.00
T/Maker Intergrated with database manager	$495.00	$379.00
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Dysan DSDD diskettes	10/box	$ 37.00
ComRiter I and II	Prt Wheels	$ 24.95
QX-10 User's Guide, Hansen	$17.95	$ 15.95
Epson and ComRex ribbons		Call

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'Someday I'm going to computerize my checkb

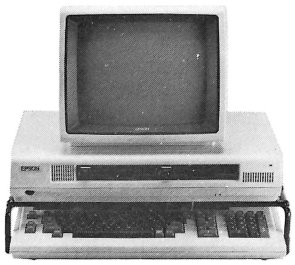
Computers crush numbers. It's that simple. If you're not using your computer to manage your money, you're missing a chance to put pencil-sharp accounting skills at your fingertips. Chuck Atkinson's **Quick Check** software program is a home and small business money manager so easy to use that if you can push a key it will help you computerize your checkbook.

Quick Check tells you exactly where your hard-earned money goes. *Quick Check* lets you set up your own expense and income codes, or use built-in codes, so you can start entering checks and deposits immediately. You don't have to know about accounting to use *Quick Check*. This common sense program gives you instant fingertip access to a wide range of information about your income and expenses. Single keystroke commands help you pay bills, keep track of deductible and non-deductible items, correct mistakes, change dates, and reconcile your checkbook. This program even prints checks and addresses them automatically. *Quick Check* is written in CB80 native code. It is fast, accurate, and forgiving. No slowdown for sorting.

Home and small business accounting can't get any easier than this. Please don't spend another moment thinking about computerizing your checkbook. You can start getting that checkbook in shape now. The list price of *Quick Check* is $95. Central's current price is $79. Order today.

Attention: The rewards of using *Quick Check* include saving time, money, work, discomfort, and worry about your money. *Quick Check* is absolutely the easiest full-featured money manager, check printer, and budget organizer available. Bar none.

Perfect Epson Stand



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In 1983 and 1984 the folks at PeopleTalk Associates set out to find the best of the free public domain programs. They spent thousands of dollars and literally hundreds of hours contacting CP/M bulletin boards, downloading software, and then going through reams of computer programs. Their diligent sifting produced the 70 precious gems offered in Central's Super Public Domain Software Pak. D.Com, Unerase, Bio.Com, RPip.Com, Adventure.Com, Food.Com, ZCPR2, Chess, and dozens of other valuable programs can all be yours to use and enjoy.

If you want to share in the free software bonanza but don't have the time to search through piles of useless software to find a few precious gems, this Public Domain Pak is for you. The list price of *The Free Software Handbook* is $17.95. Central's price is $15.95. However, QX-10 users can now get both *The Free Software Handbook* and all 70 programs reviewed in the book for $49. Save yourself the expense, and time and effort of compiling these programs. Where else can you get almost six dozen programs for less than 75 cents each and get a book that tells you how to use them too? Order today.

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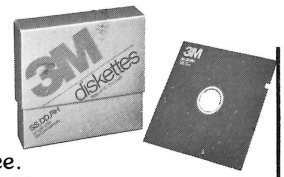

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GENEVA PX-8

Part 2–UTILITIES & SOFTWARE

by Carolyn McCarthy and Bob Hermann

This is the second part of our introduction to the new Epson Geneva PX-8 portable computer. The first part dealt with the hardware, keyboard, display, and peripherals available. This section will cover the Operating system utilities and software which comes with the computer.

Operating System Utilities

The PX-8 CP/M operating system has six resident commands which may be used from any drive when in CP/M: DIR, ERA, REN, SAVE, TYPE, and USER. The utilities ROM offers seven CP/M programs which allow for file and computer manipulation as well as offering some elementary communications capabilities: STAT, PIP, FILINK, CONFIG, SUBMIT, TERM, and XSUB. CONFIG is used to modify the system to interact with various peripherals. The RS232C port can be set up for communications, with baud rates up to 19.2 Kb available. CONFIG also allows you to assign the printer as the list device attached to the RS-232 or Serial port.

TERM is a relatively simple and easy to use communications program with no error checking protocol, which will thus transfer ASCII (text) files only. With this program you may select H (the microcassette drive) as the destination drive for receiving files and thus have the capability of receiving rather large files. Term has 4 options: DISPLAY (PF1), that puts all characters entered from the keyboard on the screen (half duplex); PRINT (PF2) duplicates the screen to an attached printer; SEND allows previously prepared files to be sent out the RS-232C port; and RECEIVE which allows text to be received and stored in a file.

FILINK will allow up/down loading of files with the QX-10, by running FILINK at the same time on the QX-10, it also allows for PX to PX transfers. A generic version will hopefully be available in the near future. You may also transfer ASCII files to and from the PX with PIP. To accomplish this use the serial port of the PX as either the source or destination for the PIP command. For instance to go from PX to the QX: the serial port on the Geneva is assigned device UC1; the QX's serial port is UL1, so on the PX you would enter PIP UC1:=filename and on the QX enter PIP filename=UL1:. This procedure will work for ASCII files, but not for a program (i.e. a .COM) file because PIP will end transmission when it hits an EOF marker, which will be found only at the end of an ASCII file but may be located throughout a .COM file.

STAT is a utility program which gives you the status of files, disk drives, and the peripherals attached. It allows you to change some of these characteristics of these units.

SUBMIT is a utility that allows you to execute the same series of commands repeatedly without having to re-enter them each time. XSUB works with SUBMIT.

Software

The software that comes standard with the PX-8 in the United States includes three packages from MicroPro; Portable WordStar, Portable Calc, and Portable Spreadsheet. In England an additional program called Portable Cardbox is included. WordStar is an extremely popular and powerful word processing software package. Having WordStar on a ROM is like a small miracle. The strengths of WordStar lie in the formatting and text-editing capabilities, as well as the number of compatible programs and number of user support guides written for it. WordStar does not have the absolute easy-to-use features found with Valdocs. In Valdocs when you press ITALICS or BOLD, you see it onscreen as it will print out, in WordStar various control sequences are used to create these special effects: CTRL-P B for bold, CTRL-P Y for italics. These control sequences are displayed on the screen with your text in WordStar, and when printed out cause the printer to print the indicated text in that mode (provided your printer has the capability). See the article in this issue featuring WordStar for more information on this word processing software.

There are some enhancements built into Portable WordStar, and some features which are not available. Features not included are: Displayed help menus, file directory, rename a file, run a program, paragraph tab, hyphen help, column mode, decimal tab, and print control display toggle. To store a WordStar file to tape you can not do it directly, the file first must be in the RAM drive, and then you can use PIP to store it to the tape drive(drive H).

Portable Calc and Portable Scheduler are contained on the same ROM (labeled Portable Calc). The Portable Calc program is effectively a

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Rx for PX

by Bob Hermann

Like any new computer product, the PX-8 is far from being a perfect computer. Several relatively fundamental problems have already surfaced, the most notable of which are communications difficulties and the incompatibility of Portable WordStar with non-Epson printers. But almost as swiftly, solutions to these quandries have appeared.

EpsonOnLine, the Epson specific interest group found on CompuServe, has been the source of much of the information on the PX. Several very dedicated and knowledgeable people are regular visitors, and they are not the least bit stingy about disseminating very useful information about the PX (or any other Epson product). One of the most helpful of these individuals is Mike Morra, the Technical Support Manager for Epson East. He, along with Charlie Strom (SYSOP of the CP special interest group on CompuServe) and Mike Rubenstein have generously answered any question addressed to them. The new PX owner who has a modem might find the $35 introductory fee for five hours of CompuServe time a bargain, considering the quality of assistance that may be obtained and relatively rapid turnaround time.

Printing Problems

The first notable problem that new PX-8 owners may have discovered was that Portable WordStar sends a "barrage of Epson-specific initialization printer codes" to the printer. If the printer is not an Epson or Epson compatible these codes will confuse it and make it impossible to obtain a hard copy output. The specified sequences start at 5D4H in WS with a 10H, setting the printer up as a half-line spacing device, thus requiring two line feed messages to accomplish one actual line-feed.

Several solutions to this dilemma have been proposed. One (presented by John Davis) involves writing a Basic program to read the print file, setting up tokens denoting underlining, boldface, etc., and then transforming these tokens into the proper ASCII values for your printer.

Charlie Strom solved the 'transmogrification' problem by loading WordStar under DDT and modifying the necessary bytes and then running WordStar using the DDT G command. Programmers at Epson East are reportedly attempting to develop a program somewhat similar to this. It would intercept data on its way to the LST device (printer), and modify the selected portions.

Terrence Ronson of the English International User's Group has already developed a program that accomplishes this procedure. Called EP44.COM, it will be featured on the EpsonConnection's first **Tape of the Month.** It may also be found on EpsonNet RBBS boards and on EpsonOnLine. Simply enter this program, and it automatically calls up WordStar (as long as WordStar is on the B drive, ROM slot #1). This program is not guaranteed to work with all printers, but should offer a solution to most. We would most certainly appreciate feedback as to which printers and functions are successfully accessed by this program.

There is also a commercially available program from England (see New Products section of this issue) that proports to accomplish the same functions. This of course means that some ingenious entrepreneure will probably be releasing a similar program in the near future.

It is also possible to PIP WordStar files to your printer. This would be accomplished as follows: PIP UC1: = FILENAME (where UL1 is the device assigned to the serial port on the PX). And if you think you can use the 'end / Receive a file' function of Portable WordStar, you are in for trouble. These options use the same special protocol that FILINK does (see below).

Communications Problems

TERM, the communications program bundled with the PX, is capable of transferring only ASCII files. This means that you need to obtain another program to be able to transfer other than ASCII files (i.e. program files). But, without the capability of obtaining another program file online, this second program must be physically obtained (either the "power that be" must drop one down your chimney or you'll have to send for a tape through the mail). PXMDM740, a program capable of Christensen protocol transfer, will also be on the EpsonConnections first **Tape of the Month.**

American ingenuity has conquered again; however, and there are at present at least two options by which it is possible to obtain a communications program online without a communications program capable of program transfer. The first solution comes from Mike Morra. There must be a PX at each end of the line. Use TERM to make the initial connection with one party in the originate mode and one in the answer mode. Once connected, both parties then should exit TERM and run FILINK. Both parties should try to execute their moves somewhat simultaneously, since FILINK will time out in a rather short period if one party is not ready. Now it is possible to send a program file, again having one party elect the Receive mode and the other the Send mode. This procedure reportedly works fine at 1200 baud. Efforts to use FILINK with any other program besides itself or QXFILINK will prove fruitless. An Epson specific error checking protocol is used in these two programs, making them incompatible with anything else. Hopefully there will be a generic version of QXFILINK available in the near future (actually, at this time QXFILINK is not officially released).

The second means of obtaining

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PORTABLE BOOK REVIEW

"Making The Most of Your HX-20"

Reviewed by Jerry DeBuhr

SPEC SPOT

Book: MAKING THE MOST OF YOUR HX-20
Author: Tim Hartnell
Publisher: Interface Publications; London and Melbourne
Computer: Epson HX-20
Price: $20
Summary: This book is well written, easily read and understood. It makes a worth while, and interesting companion to the standard Epson documentation for the HX-20.
Available from:
Kuma Computers Ltd.
12 Horseshoe Park
Pangbourne, Berkshire
England, RGB 7JW

If the HX-20 was Epsons' first "user friendly" computer, then MAKING THE MOST OF YOUR HX-20 is Tim Hartnell's duplication of that feat in a computer book. This book is a splendid example of what the Epson philosophy is all about. These 342 pages can be read quickly in just a few sittings; but they are best enjoyed over a period of several weeks, as the reader progresses up the "learning curve," as the author describes it.

The learning curve is a common sense approach to building as understanding of the capabilities designed into the HX-20. This is achieved by entering and running the illustrated programs in a hands on fashion with the machine. The programs included are chosen to illustrate topics and ideas as the reader progresses through the books pages and up the learning curve.

The book begins most fittingly from the beginning. The first two chapters welcome the reader to the machine and how it works. Next comes a fascinating discussion of computer history that even the adept programmer will find to his liking. At this point the reader is very comfortably relaxed and eager to continue. From here we get into what this book is all about, and that is programming.

This is programming really taught to the reader and not just documented or explained. One quickly gains an appreciation of the basic programming language, the commands involved and how they relate to one another in actual use. A good deal of emphasis is placed on why programs are structured in the form that they are.

Frankly speaking, this is the book's strongest suit, and is why MAKING THE MOST OF YOUR HX-20 should be seriously considered by HX users. Structure in programming once learned, understood and then put out of one's mind so to speak, allows an individual much more CREATIVE freedom in developing programs for personal use.

Such an approach to computing on the HX will be of far greater benefit than the general smattering of information that most of us gain in skimming the tutorial and reference manuals.

I surely recommend this book to HXers, whether they be new initiates or seasoned survivors.

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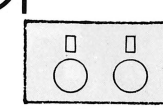
TAPE OF THE MONTH



TOM1

The EpsonConnection presents the first PX-8 Tape of the Month (TOM1). This month's tape will contain the following selections and will include some documentation.

PXMDM740.COM — A Christensen protocol modem transfer program. Thanks to Chris Rhodes for this nice adaptation for the PX. This program allows uploading and downloading of program files.

EP44.COM — WordStar patch program allowing output of Portable WordStar files to non-Epson printers. Not guaranteed to work in every instance, but capable of solving most problems.

BATTERY.COM — Tells the amount of PX battery charge remaining.

MODEM2.COM — A very small (6K) modem program supporting Christensen Protocol. A nice space saver.

To obtain this tape please send $15.00 to:

The EpsonConnection
Tape of the Month
P.O. Box 14027
Detroit MI 48214

Please specify that you desire TOM1.

Hardware Review

Modems for Portable Computing

by Bob Hermann

SPEC SPOT

Product: Lexicon 12B Modem
Type: Battery powered, 300 Baud, acoustic / direct connect modem
Computer: HX-20 or PX-8
Price: $210
Required peripherals: Respective Epson modem cables
Performance: Faultless
Documentation: Good
Summary: Trouble free operation, offering maximum flexibility with respect to type of phone available
Manufacturer:
Lexicon Corporation of Miami
6600 N.W. 16th Street
Fort Lauderdale, FL 33313

If you're like me you may have often endured hours of frustration trying to use the Epson CX-20 modem. Several remedies to its sometimes less than reliable performance have been suggested. These stopgate measures will sometimes provide more satisfactory performance, but the fact that Epson technical support even suggests them only magnifies the unreliability associated with the CX-20 modem.

Instead of all the hassle why not just use another modem. Epson will soon release a new model; the CX-21, which will hopefully be more dependable than the CX-20.

Meanwhile there is another alternative. The Lexicon 12B modem with NiCad batteries offers the same portability of the CX-20. It can be used as either an acoustic or a direct connect modem, for even greater flexibility. It uses the same cable that is used with the CX-20.

Measuring 10"X5.5"X2.4" the Lex 12B is somewhat wider than the CX-20. It is constructed of an attractive, durable plastic, and has a sleek contemporary appearance.

In over 40 uses of the Lex 12B in the acoustic mode, no problems were encountered. Its operation in this configuration is exactly like that of the CX-20. When garbage did start to appear, it was due to a low battery and was eliminated by connecting the transformer / recharger that comes with it, (up to two hours of operation are allowed with a 10 hour charge).

If you prefer to operate in the more reliable direct connect mode, flick the Acou/Talk/Direct switch to Talk, unhook the handset from its cord, and attach this cord to the 12B. Use the cord included with the modem to hook the handset to the modem. Now dial your number, and when the answer tone is heard, flick the A/T/D. switch to Direct and the ready light should illuminate. The direct connect option proved as reliable as the acoustic, as there was no difficulty whatsoever encountered in either mode.

The modem is also obtainable without the NiCad battery option for about $40 less (model Lex 12).

With the capability of direct connect or acoustic operation and battery or line power, the Lex 12B offers more flexibility than any other portable modem. Its reliable performance and the ability to use our Epson cables, only enhances its appeal for use with the HX-20 or PX-8.

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GENEVA PX-8

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full function spread sheet program with up to 16,384 cells, 64 columns x 256 rows. If you have used Super Calc, Peachtrees' Peach Calc, or are familiar with other basic spreadsheet programs, you will find Portable Calc similar to operate. Portable Scheduler uses the PX-8's internal clock and tone generator to function as a calendar and alarm. It allows personal time scheduling, with the ability of scrolling forward or backward through your appointment book. It will also display a calendar for the next month. You can set alarms for any half hour interval, and your PX will emit a tone, even when the unit is turned off.

All of the appointment information is automatically stored in the User BIOS area; because of this, the space available for your program in this area is decreased. If the User BIOS size is changed, appointments will be lost. As the appointments are entered, the User BIOS is automatically increased. Note that the maximum combined size of the User BIOS and Internal RAM Disk is 24K.

Other software packages scheduled for release for the PX-8 include: Dbase II, a data base management program from Ashton-Tate: SuperCalc, an advanced spreadsheet program from Sorcim: Business Applications, (expense and time manager programs) from Traveling Software, Inc: Unison World games by Oakwood Publishing: VT100 Emulator for DEC systems, by Cardinal Computers: FORTH by American Micro: Rags to Riches by Chang Labs: Protoge, a telecommunications program by Ascent: Telmerge by MicroPro: Geneva Connection by Epson America. Also available in the public domain and on a future EC-Tape of the month is the utility program CPMPOWER.COM and CPMPOWER.DOC. This software contains many of the functions found on the utility ROM in the PX, plus more. The best part is, CPMPOWER.COM only takes up 8K memory. There have been rumors that Valdocs 2.0 from Rising Star Industries, would also be available on a ROM chip, but this remains unconfirmed at this point.

The BASIC language that comes on a ROM chip with the PX-8 is an enhanced and powerful version of Microsoft BASIC similar to the version in the HX-20. It has a full screen editor, graphics commands, screen mode selection, and much more. We will look in depth at BASIC for the PX-8 in forthcoming articles.

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PORTABLE USER TIPS

Rx for PX

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an error checking communications program online without an error checking program to use was developed by Mike Rubenstein. What he has done is create a Basic program called MKMDM.BAS which, when run will create MODEM.COM, a version of MODEM2 configured for the PX (by Charlie Strom). TERM may be used to download MKMDM.BAS and the corresponding document program MKMDM.DOC from CompuServe. It is suggested that if you must download directly to the PX with TERM you should use 300 baud, since the file is rather large to be obtained without error checking. Without an external RAM disk or other memory expansion, you may experience difficulties with the file manipulation involved in the creation of MODEM2, but it is possible. You will have to have drive A set to at least 20K to capture MKMDM.BAS. Then PIP it to drive H; reCONFIGure drive A to 8K; then load BASIC; load MKMDM.BAS from drive H, and then run it, creating MODEM2.COM in drive A. MKMDM.BAS may be found on the EpsonConnection RBBS as well as in XA4 of the CP/MIG (go pcs-47) on CompuServe. A few notes about downloading files from CompuServe seem appropriate here. Recent file transfer problems have necessitated the posting of the following message on CompuServe: . . . all file transfers should be explicitly specified as to type — examples:

DOW FILENAME.EXT/PROT:XMODEM/TYPE:ASCII,
or
DOW FILENAME.EXT/PROT:XMODEM/TYPE:BINARY.

It should also be mentioned that if you try to download directly to drive H (your microcassete tape unit), with an error checking program, the sender may 'timeout' due to the slowness of the microcassette. Also note the following from page 6-3 of the PX-8 BASIC manual: When using communications programs other than BASIC ones, a warm start should be made before setting the RS-232C parameters using the CONFIG program. This ensures that the SI/SO and XON/XOFF parameters are set to be off.

PX WordStar to Valdocs transfers also seem to be a problem. A program is being developed to overcome this difficulty, screening out the appropriate WordStar sequences.

- Warning: don't set an alarm to go off before you can exit the alarm menu. You may not be able to get back into the alarm menu without resetting the computer and loosing some valuable files in the meantime.
- Several RAM disk problems have been reported. Page 98 of the PX-CP/M manual warns against turning the PX off without exiting the CONFIG program. Doing so can destroy the RAM disk. You can also destroy the RAM disk if the USER BIOS area is altered without reformatting the RAM disk. These difficulties are encountered because on powerup the PX does a RAM test, and any discovered bad sectors will necessitate the reformatting of the disk.
- If the NICAD batteries are consistently recharged prior to their limit of discharge, a 'memory' effect takes place and you may suddenly find that after hitting this level of discharge, the power in the cell will dissipate. To overcome this condition the batteries should be cycled through several complete charge and discharge cycles.
- If you do a STAT on any of the ROM program chips, it will appear as though these chips are only half full. This is because the computer recognizes these addresses as containing 64K, not the 32K that the chips really possess.
- It should be recognized that .BIN files are not the same as .HEX files. Rename a .BIN file to a .COM file and it should run.
- The program SD.COM will read the microcassette (drive H) file attributes correctly — STAT does not.
- Other public domain programs useful for the PX are presently available on CompuServe, and are filtering out to EpsoNet RBBS systems. They will be available on EpsonConnection Tapes of the Month. Such programs are: IOBEXC.BIN — a CIS A protocol executive; MODEM2 — a small (6K) Christianson protocol communications program; BATTERY.COM — which graphs the amount of charge remaining in the computers battery; LISTER — a program that will 'pretty print' BASIC files; and a series of MDM740 programs configured for the PX. Other CP/M utility programs especially useful on the PX will be included on "Tape of the Month" selections for those unable to obtain programs by telecommunications. These will include such titles as SWEEP, WASH, and NI.

NEW PRODUCTS

HX

HX: Square Ram

This 256K memory expansion unit plugs into the left side of the HX and uses a ROM controller located in the SkiWriter ROM socket for memory control. It has 2 empty ROM sockets (for Skiwriter, EpsonLink, etc.) and an external interface for plug in firmware cartridges. The suggested retail price is $395. Contact: SquareWare, P.O. Box 1007, Dobson NC 27107.

HX: Tele-Order

This program allows for the simplification of remote terminal sales order entry. Contact: Network Solutions, Inc., 89 Jefferson Blvd., Providence RI 02901.

HX: HX-20 Software Protection II

This machine language program resides below Basic and once executed in a Basic program prevents listing, saving, and editing of the program. Suggested price is $499.95. Contact Marlow & Assoc., 136 Lowell Street, Somerville MA 02144.

HX: HX-Changer

Offering many features of expensive cash registers, this program is designed for small establishments requiring a simple cash register. It keeps track of totals and automatically figures tax, and produces a detailed printout of all sales on the microprinter. The suggested price is $15. Contact: Software Riches, Riverview Terrace, Irvington, NY 10533.

HX: Tim, UTILHX20, and PROTON

The first of these three programs from France, TIM, is a multiple date-time appointment reminder program, with sound and text output individual to each reminder. The speaker sound output can be supplemented by an external bell or buzzer connected to the HX REM socket. It also includes a 24 hour timer function for kitchen or laboratory applications and a switchable clock-calendar live display on the LCD. The suggested price is

$149 with the Multi-Tune sound Booster an additional $39.

UTILHX20 is a set of programs designed to facilitate program development on the HX. Included are a microcassette file directory program, and several programs to provide assistance in developing and debugging assembly language programs. The suggested retail price is $69.

PROTON is a software system which protects HX programs from unauthorized copy. Suggested price is $159. For more information on the above three programs, contact: Scientific & Technical Services, 8 avenue de Geneve, 01220 Divonne-Les=*Bains, France.

PX

PX: Aprotek 1000 EPROM Programmer

This 5 volt programmer is designed to read, verify, and copy from a microcomputer with an RS232 interface. Suggested price is $250. Contact: Apropos Technology, 1071-A Avienda Acaso, Camarillo CA 93010.

PX: Audio Tutorial Tapes

These tapes provide clear and simple instructions on the programs bundled with the PX. The hour long tapes give instructions to Portable: WordStar, Calc, and Scheduler. Suggested price is about $8.00 per tape. Contact: Epson (UK), Ltd., Dorland House, 388 High Road, Wembly, Middlesex, England HA9 5UH.

PX: Transam

Transam Microsystems, Ltd. has a variety of programs available for the PX-8. Included in their growing list are: C/80, Lisp/80, TLC Pascal, Nevada Fortran,Bstam (file transfer),Blast (communications), Superfile PX1 (database), Superfile PX2, Book Indexer, and also a 6800 Code Generator Package for the HX-20. Contact: Transam Microsystems, Ltd., 59/61 Theobalds Road, London, England WC1X 8SF.

PX: Missing Link

This new file transfer system links IBM PC's and compatibles to the PX. Designed especially to work with Portable WordStar files, it contains a special utility that will prepare said files for editing and printing by any other word processor that will read an ASCII file. The included cable adapter connects the PX-8 printer cable to a serial port on the host computer. The user then initiates the software program, and enters the name of the file to be transferred. A proprietary error checking routine (with block resend) assures file accuracy at baud rates of 300, 1200, or 4800 baud. The suggested retail price is $99.00. Contact Marlow & Associates, 136 Lowell Street, Somerville MA 02144.

PX: MY PRINTER

This program is designed to overcome the problems of running Portable WordStar when using other than an Epson printer. It runs WordStar or any other applications program under its control, converting the printer control codes into ones recognizable by your printer. It may also be used with Portable WordStar to redefine WordStar printer control sequences to fully utilize the capabilities of advanced printers like the LQ-1500 or FX-80. Apart from having a menu of standard settings, data sheets are available from the manufacturer presenting suggested control codes for different printers. The suggested retail price is about $55. Contact: Sevenoake Specialized Business Systems, 51 Castle Drive, Kemsing, Sevenoaks, Kent, England TN15 6RW.

THE EpsonCONNECTION "NEW" PORTABLE SECTION WILL APPEAR MONTYLY

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PASCAL

Con't from pg. 14

language. It is possible to design our own types for variables over and above the REAL, INTEGER, and STRING types. There is a RECORD type that allows the programmer to combine a number of variables into a record block. There are special ways to pass parameters back and forth between procedures that assures the programmer that the correct parameter is being used and is protected from accidental manipulation in another part of the program. There's no sense in going into these things here when David Fox and Mitchell Waite have written such a good book called "Pascal Primer" [1]. The other references listed with this article are especially helpful. Alexander and Jerry Pournelle have built up a package "A Primer on Pascal for CP/M Systems" that implements the programs found in "Programming in Pascal" by Peter Grogono [2] for the Sorcim Pascal/M and the MT Microsystems Pascal MT+ compilers on disc. I found that with a little trouble these programs could be translated for the Borland Turbo Pascal compiler. For the beginning Pascal programmer and for the beginning programmer, these sources provide an excellent base.

This is intended as the first part of a series of articles on Pascal. The next in the series will be a review of Turbo Pascal. After that it would be nice to see a review of the Pournelle package.

References

1. David Fox and Mitchell Waite, "Pascal Primer," Howard Sams & Co., 1981.
2. Peter Grogono, "Programming in Pascal," Addison-Wesley, 1980.
3. B.W. Kernighan and P.J. Plauger, "Software Tools in Pascal," Addison-Wesley, 1981.
4. Jerry Pournelle, BYTE, May 1983, p. 298.
5. David Caor, "Pascal, Ada, and Modula-2," BYTE, August 1984.
6. Earl McCoy, "Strongly Typed Languages," BYTE May 1983, p. 418.
7. Alexander and Jerry Pournelle, "A Primer on Pascal for CP/M Systems," Workman and Associates, 1982.

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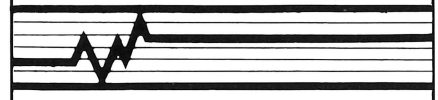

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Q&A

Con't from pg. 8

Q - In MBASIC after creating a sequential file, and accessing it, I never can get the last set of information that I put into it to come up on the screen. It always gets an INPUT PAST END error. How can I get that information out?

Park Wiker, Lancaster, PA

A - *Working with sequential files is a painstaking process indeed! There are many areas in which you must be very careful, i.e. make sure the program performs an "IF EOF(1) THEN xxxxxx" statement before each "INPUT#1," or "LINE INPUT#1" statements. Also, if you use the "INPUT#1," statement, the keyword will only retrieve a line of information as long as there are no commas in the data. The "LINE" keyword simply reads an entire line, no matter what the contents of the data are. I cannot specifically tell you what your problem might be since you didn't send the program, but the above info may help.*

Q - After the QX-PC was installed in my QX-10, neither my VALDOCS nor my CP/M disk will automatically boot upon a cold start power up. Instead my QX-10 stops with INSERT DISK message. The system will not boot until I press the reset button. Do you have any suggestions?

Michael Kayes, Long Beach, MS

A - *This problem is not unique, other QX-10 owners who have an earlier version of the QX-10 and QX-PC board also experience this. The problem has been corrected on the newer update to the QX-PC2 board which is now available. As you have discovered, you just have to press reset.*

Con't on pg. 44

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MBASIC TIP
QX-10 QUIRKS

By

Richard F. Tallini

DATING PROGRAMS WITH A SEQUENTIAL FILE

A sequential file can be used for determining the last date that a program was used. "Who needs to know when I last used a program," you may ask. Ordinarily, that would have been may response, but when I wrote a Checking program I found it vitally necessary to be informed of the last date that I wrote a check. Since that time, I have found it convenient to place this little routine within a number of programs.

```
10 OPEN "I",1,"DATE.DAT"          'Open file for input
20 IF EOF (1) THEN GOTO 40        'If file is empty GOTO 40
30 INPUT #1,D$                    'Load old date into computer
40 CLOSE                          'Close file
```

The next lines are ones from main Checking Program

```
50 CLS$=CHR$(26)
60 DEF FNPC$(R,C)=CHR$(27)+"="+CHR$(R+31)+CHR$(C+31)
70 PRINT CLS$
80 PRINT FNPC$(6,28);"*** CHECKING PROGRAM ***"
90 PRINT FNPC$(8,35);"Written By"
100 PRINT FNPC$(10,31);"Richard F. Tallini"
110 PRINT FNPC$(12,30);"Last Date Used: ";D$
```

The next lines are remainder of Dating utility:

```
120 OPEN "O",1,"DATE.DAT"
130 PRINT FNPC$(14,30);"Enter Today's Date: ";
140 LINE INPUT D$
150 WRITE #1,D$
160 CLOSE
```

The first time you run the program type RUN 50 then press <RETURN>. This will bypass the first four lines and prevent a "FILE NOT FOUND" error, since the file has not been opened. The Last Date used will, of course be blank. The file will be opened and tha date you type will be recorded. From this point on start the program with a RUN. The Last Date used will now show as the date that was entered the previous run.

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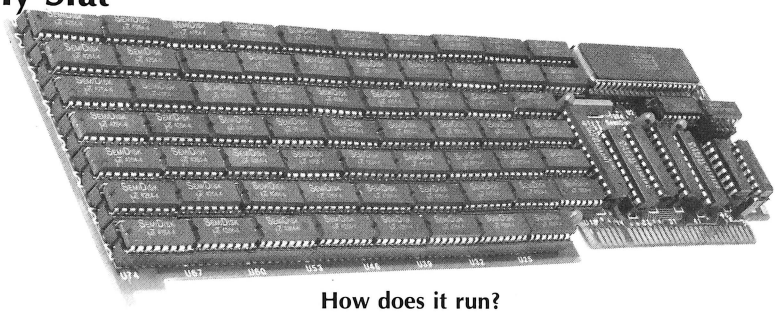
Hardware Review

SEMIDISK

by Ty Sfat



SPEC SPOT

Product: SemiDisk
Type: A Ramdisk for the QX computer
Computer: QX-10
Price: 512K $799., 2Mb $2499.
Performance: Excellent
Documentation: Good
Summary: An excellent Ram Disk emulator card to install in an option slot of the QX-10
Manufacturer:
SemiDisk Systems, Inc.
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What is a SemiDisk:

SemiDisk is a card which can be installed in an option slot of your QX computer. It is filled with dynamic RAM memory chips, and comes in two different memory configurations: 512K and 2 Megabytes. RAM memory is referred to as Random Access Memory. On a tape player you access the data sequentially, and have to wait to rewind or go forward through a tape to find a particular piece of data you might be looking for. In RAM memory, you can access the data randomly, without the time involved in searching through the entire file. This type of memory only retains the information as long as a source of power is maintained to it. Turning off the power (or losing power to the unit) will erase all the data stored in memory. SemiDisk also sells a battery back-up unit. Running programs directly in RAM memory is about twice as fast as on a hard disk drive, and 20 times as fast as on a floppy disk drive. A distinct advantage of a RAM disk is that there are no moving parts, no motors, and dust particles do not interfere with its operation. This coupled with the speed make it a very desirable peripheral.

Installation

Installation of the SemiDisk is very simple. It is installed in an internal option slot of the Epson QX computers. This requires you to remove the screws in the rear of the CPU unit which hold the expansion slot cover in place, and gently press the SemiDisk board into one of the option slots provided (on the QX-10 this is slot 5). Replace the cover and use the software provided with the unit to run the initialization program. This is like a formatting procedure which is required each time you turn on the power to the computer, unless you keep the unit battery-backed up. Make a duplicate copy of the SemiDisk diskette, then type in <SEMIDISK>, press <RETURN>, and you now have a 512K RAM disk as drive "C". We recommend you read the instructions from SemiDisk Systems before installation.

Documentation

The instructions provided are easy to follow and simple to utilize. There are help screens on the SEMIDISK diskettes, which supplement the instructions. The instructions are separated into four parts plus three appendixes. They outline various uses and features available.

Section 1 contains first-time quick installation instructions.

Section 2 tells how to deal with multiple semidisk installations. It also has a table for sector addressing for each additional board.

Section 3 deals with hardware interfacing and detailed Port base addressing.

Section 4 goes into more detailed instructions for custom installation of the SemiDisk. A whole new world of possibilities such as Hyper-Boot, Auto-Update, Format/AutoFormat and SemiSpool. SemiSpool will spool files for printer output allowing you to continue with other wordprocessing or computer tasks while the printer is doing its job.

How does it run?

For this evaluation we used the 512K SemiDisk. We used Micro-Plan by MicroPro as the software we tested it with. Loading the software on the SemiDisk is similar to loading it onto the QX-10 RAM drive "M" under the CP/M 80 B release. You PIP it onto the drive, and run it there. SemiDisk allowed the spread-sheet to expand the number of usable cells by a significant amount. First a table was designed on the standard 5¼ floppy disk, and then we ran the the various Micro-Plan commands. We ran the same program and same tables on both the floppy disk drives and the SemiDisk. The table size was able to be enlarged 100% on the SemiDisk. Execution on the SemiDisk was virtually instantaneous. The commands were performed up to tens times as fast on the SemiDisk as compared to on the floppy disk drives.

There has been discussion that Valdocs 2 will have drivers built in to load it onto the SemiDisk and run on it, this would be a nice option.

Technical details

This is a maximum density multi-layer construction product. SemiDisk has achieved the optimum board size to memory ratio with 64K chips. With the advent of 256K dynamic RAM chips the board could achieve a memory per board of 2Mbytes. It is possible to add more boards up to 8Mbytes for the QX-10.

Why Get a SemiDisk

If you need speed, and additional memory this is definitely the way to go. It is not a substitute for a harddisk drive unit with 10Mb or more of storage, but it is definitely a great peripheral to own.

Q&A

Con't from pg. 41

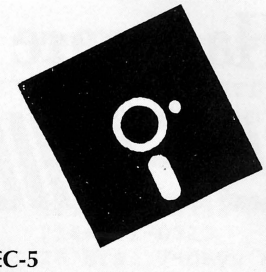
Q - I need some information about the QX-PC, the MS-DOS operating system. What exactly would I be able to do with it that I cannot do now? Could someone please tell me in simple words? (I have the Word Star programs, the CP/M-80 of March 1984, and VALDOCS, of course). I'll bet you're going to tell me that it will run any program designed for the MS-DOS, whatever that is!!

Emelie Ruth Dodge,
Scarsdale, New York

A - *The QX-10 uses the Z80A microprocessor and is an eight bit machine. Eight bit machines most commonly run the CP/M operating system. The QX-PC board uses the 8088 processor and is a 16 bit computer, which uses most commonly, MS-DOS. What does all this mean? Well, like people, computers also grow in generations, and the 16 bit processor chip is a generation ahead of the eight bit processor,*

Con't on pg. 45

Disc of the Month



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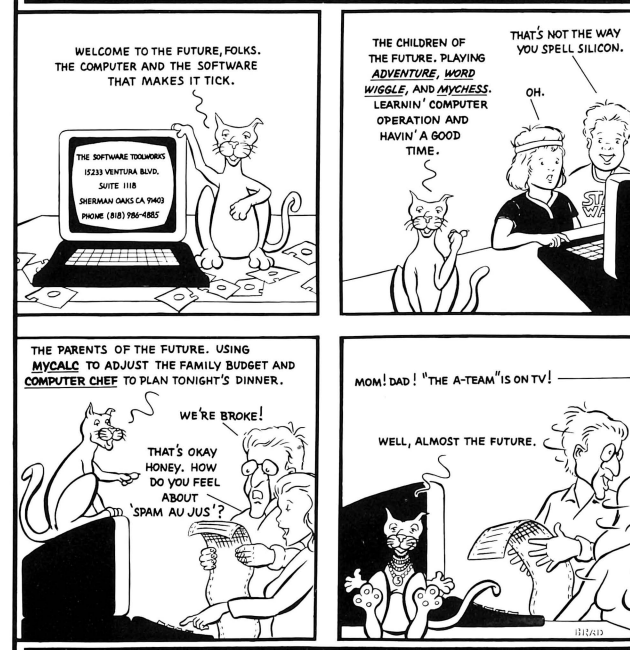
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Q&A

Con't from pg. 44

and a 32 bit processor is a generation ahead on the 16 bit. These leaps of processor size generally mean the processor is faster and more versatile, more "state-of-the-art". The eight bit processors for microcomputers are approximately 10 years old, but the 16 bit are fairly new, only 3 or 4 years old, and are believed to be a "new-wave" of microcomputer processors. Software written with a 16 bit machine, in most cases, can not run on an eight bit machine. If there is an existing software package that you must have that is only capable of running on the 16 bit processor, then you need to get a 16 bit board (or computer). If you can run all of the software you need on an 8 bit machine, there is probably no need for a 16 bit machine. The original QX-PC board from Titan and sold via Epson dealers ran only some of the IBM software. Their soon to be released board, QX-PC2, runs just about all the MS-DOS and some PC-DOS software. Owners of the original board will be able to upgrade it soon.

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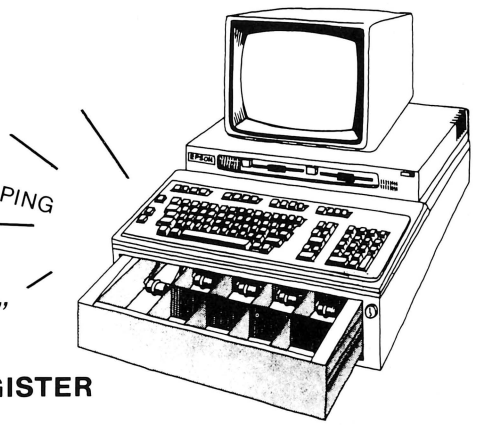

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Upload/Download Protocol Between R/S Model 100 and Epson QX-10

by P.B. Caley

HARDWARE — Connect the two RS-232 ports of the computers together with the proper cable.

CONFIGURATION — Configure both computers to the same configuration. I find this setting satisfactory: Baud rate - 4800; Word length - 8; Parity - none; Stop bits - 1; Line status - Enabled.

UPLOAD PROCEDURE — On the Model 100 bring up the text to be transferred to the screen. Press key F-3. Next type COM:78N1E. On the QX-10, using a disc containing PIP, get into PIP. Type in the name you wish to give the file followed by the User Defined Reader Code. For example, enter this: TRS.DOC=UR1:. Then press RETURN on the QX-10 followed by ENTER on the M-100. When the asterisk reappears press RETURN. If you are using Valdocs, recall the file through CONTROL Q.

DOWNLOAD PROCEDURE — On the Model 100 enter TEXT and give a name to the file being created. Press ENTER. press key F2. Type COM:78N1E. On the QX-10 get into PIP, following the asterisk type the User Defined Punch Code followed by name of the file to be transferred. For example, enter this: UP1:=TRS.DOC. Press ENTER on the M-100 followed by RETURN on the QX-10. You will not see the file appear on either screen. After the asterisk reappears on the QX-10 you know that the transfer is over. Press BREAK on the M-100 and your transferred text will appear. Only ASCII, non-indexed (non-Valdocs) files will transfer.

HINT — If you are typing a document into the QX-10 which you know you will want to transfer into the Model 100, turn off Word-wrap and set the margins wide on the QX-10 before you do the typing. This will save you from having to remove control codes, margin spaces, etc., after you get back to the Model M-100.

▲ ▲ ▲

NEW PRODUCTS

Bookstore

CP/M Bible
by Mitchell Waite and John Angermeyer. Howard Sams and Co.,Inc, 4300 West 62nd Street, Indianapolis IN 46268. $19.95.

This 429 page book is an excellent reference guide to CP/M. It provides a complete description of all the built-in and transient commands, and all operating procedures. Although geared to version 2.2, it provides an overview of 3.0 as well as a comparison with older versions. It is designed for quick and easy lookup of any procedure.

Soul of CP/M
by Mitchell Waite and Robert Lafore. Howard Sams and Co., Inc., 4300 West 62nd Street, Indianapolis IN 46268. $18.95.

This is an instructional book which teaches 8080 assembly programming and CP/M system calls. The authors use what is termed a code-fragment approach with DDT to try and make the process as simple as possible.

How to Run Your Business with dBase II
by Richard H. Baker. Tab Books Inc., Blue Ridge Summit, PA 17214. 16.95.

This book demonstrates how to use dBase II to set up personnel records, perform payroll duties, keep inventory, pay bills, and more. It assumes no prior knowledge of dBase or databases in general, providing a background of information and principles necessary to properly implement dBase. Extensive program examples are included in this 306 page book.

Advanced dBase II User's Guide
by Adam B. Green. Prentice-Hall, Inc, Englewood Cliffs NJ 07632. $29.00.

This book assumes some familiarity with dBase and provides extensive examples of how to best use the advanced features of the program. In addition to providing numerous examples of macros, the author also covers common programing errors and debugging techniques and presents a variety of routines that the reader will find immediately useful.

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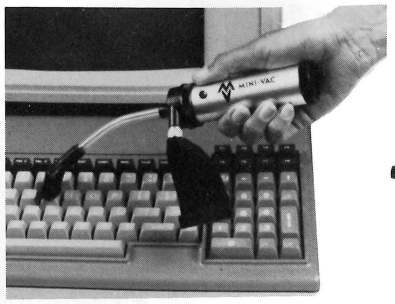

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212A Modem Comparison Chart *

STANDARD FEATURES	PRO	HAYES STACK	NOVATION SMARTCAT+	ANCHOR 1200	US ROBOTICS PASSWORD
300/1200 Baud (212A)	✓	✓	✓	✓	✓
Intelligent Microprocessor	✓	✓	✓	✓	✓
Tone and Pulse Dialing	✓	✓	✓	✓	✓
Hayes Command Compatible (Works with Smartcom™)	✓	✓	✓	✓	
Additional telephone jack with exclusion switching	✓				
Analog loop back self test	✓	✓	✓		
Self Test at Power Up	✓		✓		
Call Progress Detection (Busy, Dial Tones, Trunk Busy, etc.)	✓		✓		
Speaker and External Volume Control	✓	✓	✓		
Full Complement of Status Lights	✓	✓			
8 Switch Selectable power-up defaults	✓	✓			
Adaptive Dialing	✓				
Auto Redial on Busy	✓	✓	✓		
Ergonomically designed easy to read front display panel	✓				
Internal Stand-Alone Power Supply	✓				
Built in Real Time Clock/Calendar	✓				
Help Command	✓				
300 baud connect while maintaining 1200 baud RS-232 link	✓				
EXPANDABLE OPTIONS					
Automatic Receiver Buffer	✓				
Automatic Transmit Buffer	✓				
On-board Personal/Business Directory	✓				
Buffer, Expandable to 64K	✓				
Auto Logon Macros	✓				
Auto message transmission to groups of numbers	✓				
Records call duration	✓				
12-character Alphanumeric Display	✓				

*Comparison made by Prometheus on the basis of the best information available to Prometheus at time of printing.